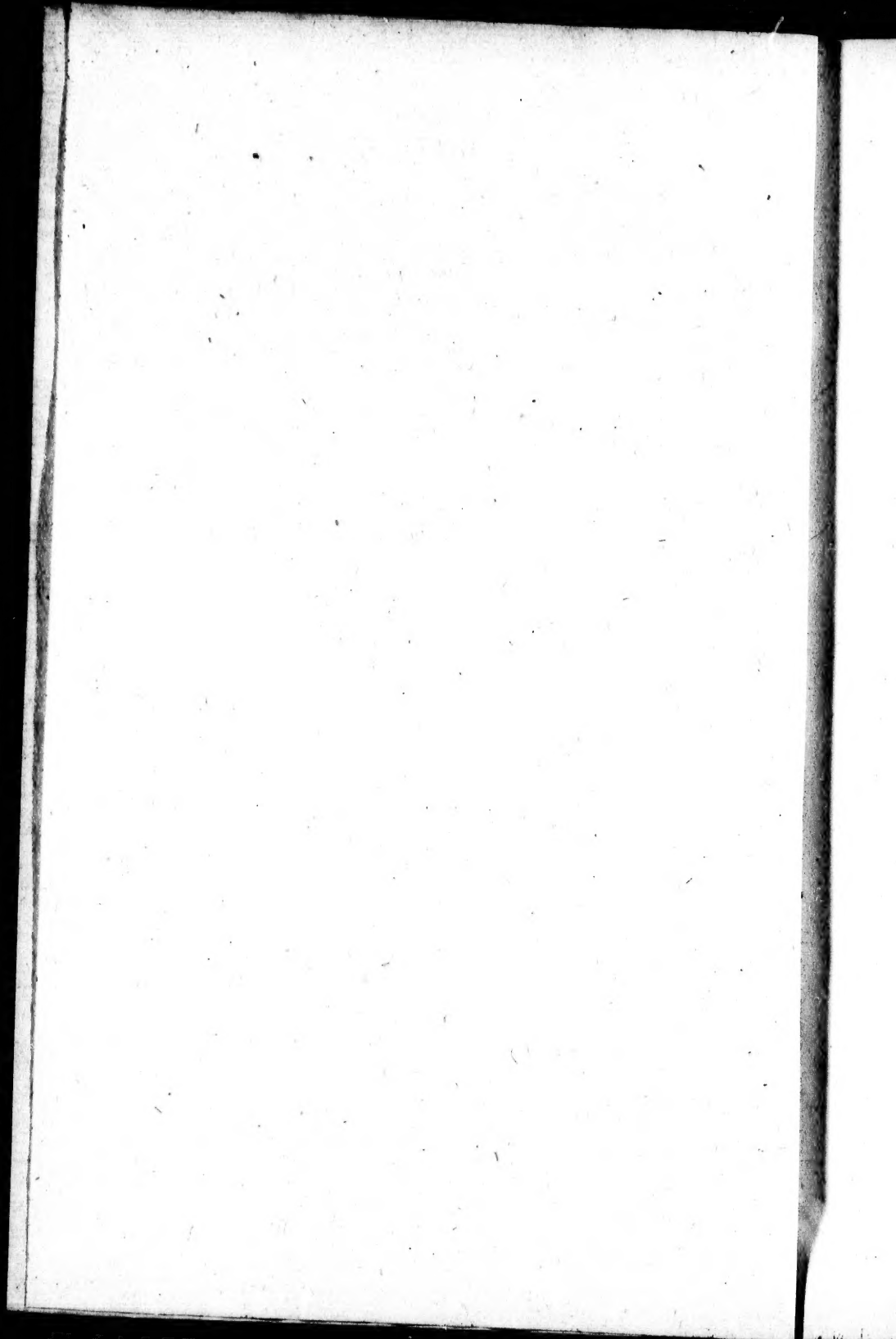




THE
NATURAL HISTORY
OF
B I R D S.

FROM THE FRENCH OF THE
COUNT DE BUFFON.

ILLUSTRATED WITH ENGRAVINGS;
AND A
PREFACE, NOTES, AND ADDITIONS,
BY THE TRANSLATOR.

IN NINE VOLUMES.

V O L. VIII.

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C O N T E N T S

OF THE

E I G H T H V O L U M E.

	Page
<i>THE Ibis</i> — — —	1
<i>The White Ibis</i> — — —	13
<i>The Black Ibis</i> — — —	17
<i>The Curlews</i> — — —	18
2. The Whimbrel — — —	24
3. The Green, or Italian Curlew — — —	25
4. The Brown Curlew — — —	28
5. The Spotted Curlew — — —	29
6. The Bald Curlew — — —	30
7. The Crested Curlew — — —	32
 <i>CURLEWS of the New Continent.</i> — — —	 33
1. The Red Curlew — — —	ib.
2. The White Curlew — — —	39
3. The Red-fronted Brown Curlew — — —	40
4. The Wood Curlew — — —	41
5. The Guarona — — —	42
6. The Acalot — — —	43
7. The Shore Matuitui — — —	45
8. The Great Curlew of Cayenne — — —	46

C O N T E N T S.

	Page
<i>The Lapwing</i> — — —	47
2. The Swift Lapwing — —	58
3. The Armed Lapwing of Senegal —	60
4. The Armed Lapwing of the Indies —	62
5. The Armed Lapwing of Louisiana —	63
6. The Armed Lapwing of Cayenne —	65
 <i>The Lapwing-Plover</i> — — —	 67
<i>The Plovers</i> — — —	71
1. The Golden Plover — —	78
2. The Alwargrim Plover — —	82
3. The Dotterel — — —	84
4. The Ring Plover — —	88
5. The Noisy Plover — —	93
6. The Crested Plover — —	95
7. The Spur-winged Plover — —	96
8. The Hooded Plover — —	97
9. The Crowned Plover — —	98
10. The Wattled Plover — —	99
11. The Armed Plover of Cayenne —	100
 <i>The Pluvian</i> — — —	 101
<i>The Great Plover</i> — — —	102
<i>The Long-Shank</i> — — —	109
<i>The Oyster-Catcher</i> — — —	113
<i>The Swift-Runner</i> — — —	121
<i>The Turn-Stone</i> — — —	123
<i>The Water-Ouzel</i> — — —	126
<i>The Water-Thrush</i> — — —	132
<i>The Knot</i> — — —	134
<i>The Rails</i> — — —	136
1. The Land Rail — —	137
2. The Water Rail — —	144
3. The Marouette — —	147

FOREIGN

CONTENTS.

Page		Page
47	FOREIGN BIRDS of the <i>Ancient Continent, which</i>	
58	<i>are related to the Rail.</i>	150
60	1. The Tiklin, or Philippine Rail	ib.
62	2. The Brown Tiklin	151
63	3. The Striped Tiklin	152
65	4. The Collared Tiklin	153
67	FOREIGN BIRDS of the <i>New Continent, which</i>	
71	<i>are related to the Rail</i>	154
78	1. The Long-Billed Rail	ib.
82	2. The Kiolo	155
84	3. The Spotted Rail of Cayenne	156
88	4. The Virginian Rail	157
93	5. The Jamaica Rail	158
95	6. The Little Cayenne Rail	159
96	<i>The Caurale</i>	161
97	<i>The Water-Hen</i>	163
98	<i>The Little Water-Hen</i>	168
99	<i>The Porzana, or the Great Water-Hen</i>	169
100	<i>The Grinetta</i>	170
101	<i>The Smirring</i>	171
102	<i>The Glout</i>	172
109	FOREIGN BIRDS, which are related to the <i>Wa-</i>	
113	<i>ter-Hen</i>	173
121	1. The Great Water-Hen of Cayenne	ib.
123	2. The Mittek	174
126	3. The Kingalik	175
132	<i>The Jacana</i>	177
134	2. The Black Jacana	181
136	3. The Green Jacana	182
137	4. The Jacana-Peca	183
144	5. The Variegated Jacana	185
147	<i>The Sultana Hen, or Porphyrio</i>	186

C O N T E N T S.

	Page
BIRDS which are related to the Sultana Hen —	193
1. The Green Sultana Hen —	195
2. The Brown Sultana Hen —	196
3. The Angoli —	197
4. The Little Sultana Hen —	198
5. The Favourite —	199
6. The Acinthe —	200
 <i>The Common Coot</i> —	 202
<i>The Crested Coot</i> —	209
<i>The Phalaropes</i> —	ib.
1. The Cinereous Phalarope —	210
2. The Red Phalarope —	211
3. The Phalarope with Indented Festoons —	212
 <i>The Grebe</i> —	 213
2. The Little Grebe —	218
3. The Crested Grebe —	219
4. The Little Crested Grebe —	220
5. The Horned Grebe —	221
6. The Little Horned Grebe —	222
7. The Black-breasted Grebe —	223
8. The Louisiana Grebe —	224
9. The Red-Necked Grebe —	225
10. The Great Grebe —	ib.
 <i>The Chesnut</i> —	 228
2. The Philippine Chesnut —	230
3. The Circled-Bill Chesnut —	ib.
4. The St. Domingo Chesnut —	231
5. The Coot-Grebe —	232
 <i>The Divers</i> —	 233
1. The Great Diver —	234
2. The Little Diver —	237
3. The Sea-Cat Diver —	238
4. The Imbrim, or Great Northern Diver —	241
5. The Lumme, or Little Diver of the Northern Sea —	243
	<i>The</i>

C O N T E N T S.

Page		Page
193	<i>The Merganser</i> — — —	248
195	2. The Crested Merganser — —	252
196	3. The Piette, or Little Crested Merganser — —	254
197	4. The Mantled Merganser — —	255
198	5. The Stellated Merganser — —	256
199	6. The Crowned Merganser — —	258
200	<i>The Pelican</i> — — —	259
202	<i>VARIETIES of the Pelican</i> — — —	277
209	1. The Brown Pelican — —	278
ib.	2. The Indented-billed Pelican — —	281
210	<i>The Cormorant</i> — — —	282
211	<i>The Shag</i> — — —	290
212	<i>The Sea Swallows</i> — — —	297
213	1. The Great Sea Swallow — —	302
218	2. The Lesser Sea Swallow — —	307
219	3. The Guifette — —	308
220	4. The Black Guifette; or, the Scare-Crow — —	309
221	5. The Gachet — —	311
222	6. The Sea Swallow of the Philippines — —	312
223	7. The Sea Swallow of great Alar Extent — —	313
224	8. The Great Sea Swallow of Cayenne — —	315
225	<i>The Tropic Bird</i> — — —	316
ib.	1. The Great Tropic Bird — —	321
228	2. The Little Tropic Bird — —	322
230	3. The Red-shafted Tropic Bird — —	323
ib.	<i>The Boobies</i> — — —	326
231	1. The Common Booby — —	333
232	2. The White Booby — —	336
233	3. The Great Booby — —	337
234	4. The Little Booby — —	339
237	5. The Little Brown Booby — —	ib.
238	6. The Spotted Booby — —	340
241	<i>The Gannet</i> — — —	341
243	<i>The Frigate</i> — — —	346
<i>The</i>	<i>The Gulls and the Mews</i> • — —	354
	1. The	

C O N T E N T S.

	Page
1. The Black-mantled Gull — —	365
2. The Gray-mantled Gull — —	366
3. The Brown Gull — —	368
4. The Variegated Gull; or, the Grisard — —	372
5. The Brown-gray-mantled Gull; or, the Bur- gomafter — —	376
6. The Gray and White-mantled Gull — —	379
<i>The White Mew</i> — —	380
2. The Spotted Mew; or, the Kutgeghel — —	381
3. The Great Cinereous Mew; or, the Blue- footed Mew — —	384
4. The Little Cinereous Mew — —	386
5. The Laughing Mew — —	389
6. The Winter Mew — —	394
<i>The Labbe, or Dung-Bird</i> — —	400
<i>The Long-tailed Labbe</i> — —	404
<i>The Anbinga</i> — —	406
<i>The Rufous Anbinga</i> — —	410
<i>The Shearbill</i> — —	412
<i>The Noddy</i> — —	418
<i>The Avofet</i> — —	422
<i>The Runner</i> — —	428
<i>The Red Flamingo</i> — —	431

T H E
N A T U R A L H I S T O R Y
O F
B I R D S.

The I B I S*.

OF all the superstitious practices that have ever degraded the human race, the worship of animals might be deemed the most abject and the most absurd: and yet did that propensity originate from the purest of motives. In the early ages of the world, man was on all sides encompassed by dangers, and had to struggle naked and unarmed against the formidable attacks of his numerous foes. Those animals, therefore, which conspired with his efforts to destroy and eradicate the hostile tribes, were na-

* In Greek *ἰβίς*, which the Romans adopted. It has no name in European languages, as being unknown in our climates. According to Albertus, it was called in Egyptian *Leheras*. In Avicenna, the word *Anschux* denotes the Ibis. St. Jerome was mistaken in translating *Janschuph* (*Leviticus*, ii. *Isaiab*, xxxiv.) by Ibis, for a nocturnal bird is meant in that passage. Some interpreters render the Hebrew word *Tinschemet* by Ibis.

turally entitled to his regard and affection. But the sentiment of gratitude afterwards degenerated into veneration; and fear and interest, nourishing the groveling propension, both the useful and the pernicious creatures were alike exalted into the rank of gods.

Egypt is one of those countries where animal-worship was of the highest antiquity, and observed with the most scrupulous attention, for many ages; and that humiliating species of idolatry, which is authenticated by all the monuments that have been transmitted to posterity, seems to prove, that the original settlers had long contended with the noxious animals. In fact, crocodiles, serpents, grasshoppers, and all the other loathsome creatures, teemed in the deep and spacious mud, deluged by the annual inundation of the river. The heat of a tropical sun fostering the rich slime would engender infinite numbers of offensive and shapeless beings, which would successively be effaced, till the earth, purged of its impurities, was occupied by nobler inhabitants.

“Swarms of little venomous serpents,” the early historians relate *, “rose out of the slime of marshes, and flying in a great body towards Egypt, would have entered into that country and spread desolation, had not the Ibis opposed itself to their inroad, and repelled them.”

* Herodotus, *Euterpe*, No 76. Ælian, Solinus, Marcellinus, Pomponius Mela, *lib. iii.* 8.

Was not this the source of the superstitious veneration paid to that bird? The priests encouraged the notions of the vulgar; when the gods, they said, deigned to assume a visible form, it was that of the Ibis. Their tutelar deity *Thoth* or Mercury, the inventor of arts and of laws, had already undergone that transformation*; and Ovid, faithful to this ancient mythology, in the battle of the gods and giants, conceals Mercury under the wings of an Ibis, &c†. But setting aside all these fables, we have still to examine the history of the combats between these birds and the serpents. Herodotus assures us, that he went to view the field of battle. “Near the town Butus,” he says, “on the confines of Arabia, where the mountains open into the vast plain of Egypt, I there saw immense heaps of serpents’ bones‡.” Cicero cites this passage§, and Pliny seems to confirm it, by saying, that the Egyptians invoke the Ibises against the invasion of serpents||.

We read also in the historian Josephus, that when Moses made war on the Æthiopians, he carried, in cages of *papyrus*, a great number of Ibises, to oppose them to the serpents¶. This

* Plato in *Phædr.*

† Metam. lib. v.

‡ Herodotus, *Euterpe*, Nos 75 and 76.

§ Lib. i. *De Nat. Deorum.*

|| Hist. Nat. Lib. x. 28.

¶ *Antiq. Judaic.* lib. ii. 10.

story, which is not very probable, is easily explained by a fact mentioned by Maillet, in his description of Egypt: "A bird named *Pharaoh's capon* (known to be the Ibis) follows more than "an hundred leagues the caravans in their "route to Mecca, for the sake of the dung left "at the encampments, though at other times it "is never seen on that track *." We may presume, that the Ibises thus accompanied the Hebrew nation in their march out of Egypt; and that Josephus has disfigured the fact, by ascribing to the prudence of the general what was due only to the instinct of the birds; and has introduced the army of Æthiopians and the cages of papyrus to embellish his narration, and to exalt our idea of the legislator of the Jews.

To kill the Ibis was, among the Egyptians, forbidden under pain of death †. That people, whose temper was equally gloomy and vain, invented the lugubrious art of preparing mummies, by which they endeavoured, we may say, to perpetuate death, and to counteract the benevolent views of nature, which, in compassion to our feelings, labours assiduously to efface every dismal and funereal image. Not only were they solicitous to preserve human bodies, they applied their skill in embalming to the sacred animals. Many receptacles of mum-

* Description de l'Égypt, partie II. p. 23.

† Herodotus, *uti supra*.

mies which have been dug up in the plain of Saccara are called *bird-pits*, because only birds are found embalmed, particularly the Ibis, contained in tall earthen pots, whose orifice is stopped with cement. We have received several of these vessels; and in all of them we discovered a sort of doll, formed by the bandages which encased the bird, of which the greatest part fell into black dust when the ligatures were removed. We could however perceive all the bones of a bird, with the feathers sticking to some bits of flesh that remained solid. From these fragments we could judge of the size of the bird, which was nearly equal to that of the curlew; and the bill, which was preserved in two of the mummies, showed the genus: it was as thick as that of a stork, was curved like the bill of the curlew, but not channelled: and as its curvature is equal throughout, we may place the Ibis between the stork and the curlews *. In fact, so nearly is it related to both these genera of birds, that the modern naturalists have ranged it with the latter, and the ancients had classed it with the former. Herodotus has distinctly characterized the Ibis, by saying that "its bill is much hooked, and its legs like those of the crane." He takes notice of two species: "The first," he relates, "is entirely black; the second, which constantly occurs, is all

* See one of the bills represented by Edwards, plate 105.

“ white, except the tips of the feathers of the
 “ wing and tail, which are very black ; and the
 “ neck and head, which are only covered with
 “ skin.”

But I must here remove the obscurity with which this passage of Herodotus has been involved by the ignorance of translators, and which casts an air of fable and absurdity on the whole. A clause which ought to have been rendered literally, “ *which oftener occur among men’s feet,*” runs thus in their versions, “ *these indeed have feet like men.*” Naturalists, at a loss to conceive the import of this odd comparison, have strained to explain or palliate it. They suppose that Herodotus mistook the stork for the white ibis, and imagined its flat toes to resemble those of a man. But this interpretation was unsatisfactory; and the Ibis with human feet might have been rejected among the fables. Yet under this absurd image was it admitted as a real existence; and we cannot help being surprised to find at present this account inserted in the memoirs of a learned academy*: though the chimera is only the production of the translator of that ancient historian, whose candour in acknowledging the uncertainty of his narratives, when drawn from other information, ought to

* “ The other species (the White Ibis) has its feet fashioned
 “ like the human feet.” *Memoirs de l’Academie des Inscriptions &
 Belles Lettres*, tome ix. p. 28.

procure him credit in subjects that came under his own observation.

Aristotle, too, discriminates two species of Ibis; he adds, that the white kind is spread over all Egypt, except near Pelusium, where only the black ones occur, which are seen in no other part of the country*. Pliny repeats this particular observation†. But all the ancients, at the same time that they remark the difference of the two birds in point of colour, ascribe to them both the same common figure, habits, and instincts; and regard Egypt, in exclusion to every other country, as their proper abode‡. If it was carried abroad, they alledge, it languished out its days, consumed by the desire of revisiting its native soil§. A bird so ardently attached to its country, naturally became the emblem of it: the figure of the Ibis, in the hieroglyphics, denotes Egypt, and few images or characters are oftener repeated on all the monuments. They appear on most of the obelisks; on the base of the statue of the Nile, at the Belvidere in Rome, and also in the garden of the Thuilleries at Paris. In the medal of Adrian, where Egypt appears prostrate, the Ibis is placed at her side; and this bird is figured with an

* Hist. Animal. lib. ix. 27.

† Hist. Nat. lib. x. 30.

‡ Strabo places them also on a fresh-water lake, near Lichas, in the extremity of Africa.

§ Ælian.

elephant in the medal of Quintus Marius, to signify Egypt and Lybia, the scenes of his exploits, &c.

If such was the popular and ancient regard paid to the Ibis, it is not surprizing that its history has been charged with fables. It has been said to procreate with its bill *: Solinus seems not to doubt this; but Aristotle justly ridicules the notion of virgin purity in this sacred bird †. Pierius relates a wonder of an opposite kind; he says that, according to the ancients, the basilisk was hatched from an Ibis' egg, formed in that bird from the venom of all the serpents which it devoured. They have also asserted that the crocodiles and serpents, when touched with an Ibis' feather, remained motionless as if enchanted, and often died on the spot. Zoroaster, Democritus, and Philo have advanced these tales; and other authors have represented it as living to an extreme age: the priests of Hermopolis pretended even that it might be immortal, and as a proof they showed Appion an Ibis so old, they said, that it was no more subject to death.

These are but part of the fictions on the subject of the Ibis, fabricated in the religious land of Egypt: superstition ever runs into extremes; but if we consider the political motives that

* Ælian.

† *De Generatione Animalium*, lib. iii. 6.

would

would induce a legislator to establish the worship of useful animals, we must admit the necessity in that country of preserving and multiplying them, in order to repress or extirpate the noxious tribes. Cicero * remarks judiciously, that no animals were held sacred by the Egyptians but such as merited regard from extreme utility to them: an † opinion moderate and wise, very different from the sentence of the severe and violent Juvenal, who reckons the veneration paid to the Ibis among the crimes of Egypt; and inveighs against that worship, which superstition no doubt overstrained, but which prudence ought to maintain; since such is the weakness of man, that the most profound lawgivers have made that spurious passion the foundation of their structures.

But to consider the natural history of the Ibis,

* *Ægyptii nullam belluam, nisi ob aliquam utilitatem quam ex ea caperent, consecrârunt velut Ibes, maximam vim serpentium conficiunt, cum sint aves excelsæ, cruribus rigidis, corneo proceroque rostro; avertunt pestem ab Ægypto, cum volucres angues, ex vastitate Lybiæ, vento Africo invectas, interficiunt atque consumunt, ex quo fit ut illæ nec morfu vivæ noceant nec odore mortuæ; eam ob rem invocantur ab Ægyptiis Ibes.*—De Nat. Deor. lib. i.

M. Perrault has mistaken the latter part of this sentence. *Anciens Memoires de l'Academie*, tom. iii. partie 3.

† We can scarce give this as the reason of the worship of the crocodile: but that animal had adoration paid it only in a single city of the Arsinoïte tribe, while its antagonist, the ichneumon, was venerated all over Egypt. Besides, in this city of crocodiles, these destructive animals were worshipped under the impression of fear, with the idle view to detain them from visiting a place whither the stream naturally never bore them.

we find it has a strong appetite to feed on serpents, and even a sort of antipathy to all reptiles. Belon assures us that it continues to kill them, though sated with prey. Diodorus Siculus says, that night and day the Ibis, walking by the verge of the water, watches reptiles, searching for their eggs, and destroying the beetles and grasshoppers which they meet. Accustomed to respectful treatment in Egypt, these birds advanced without fear into the midst of the cities. Strabo relates, that they filled the streets and lanes of Alexandria to such a degree as to become troublesome and importunate, consuming indeed the filth, but also attacking provisions, and defiling every thing with their dung: inconveniencies which would shock the delicate and polished Greek, though the Egyptians so grossly superstitious, might cheerfully submit to them.

These birds breed on the palm-trees, and place their nest in the thick bunches of the sharp leaves, to be safe from the attacks of their enemies, the cats *. It appears that they lay four eggs, such at least is the number which we may infer from the explication given by Pignorius of the table of Isiacus: He says, that the Ibis "makes its eggs after the manner "of the moon †;" which seems to have no

* Philo, *de propriet. Animal.*

† *Ad lunæ rationem ova fingit.* Menf. Isid. Explic. p. 76.

other import than what Dr. Shaw has noticed, that the bird lays as many eggs as the moon has phases. Ælian explains why the Ibis was consecrated to the moon, and marks the time of its incubation, by saying that it sat as many days * as the star Isis took to perform the revolution of its phases †.

Pliny and Galen ascribe the invention of the clyster to the Ibis, as they do the letting blood to the hippopotamus ‡: "Nor are these the "only things," the former adds, "in which "man has profitably imitated the sagacity of "animals §." According to Plutarch, the Ibis uses only salt-water for that purpose. Perrault, in his anatomical description of this bird, asserts that he observed a hole in the bill, through which the water might be discharged.

We have said that the ancients distinguished

* Plutarch assures us that the young Ibis, just hatched, weighs two drachms. *De Isid. & Osir.*

† Clement of Alexandria, describing the religious repasts of the Egyptians, says, that among other dishes they carried round among the guests an Ibis; this bird, by the black and white of its plumage, was the emblem of the dark and lucid moon. *Stromat. lib. v. p. 671.* And, according to Plutarch (*De Isid. & Osir.*) the lunar crescent was represented by the disposition of the white upon the black of the plumage.

‡ Galen. *lib. de Plebot.*

§ *Simile quiddam (solertiæ hippopotami, sibi junco venam aperientis) & volucris in eadem Egypto monstravit, quæ vocatur Ibis; rostro aduncitate per eam partem perluens, quâ reddi ciborum onera maxime salubre est. Nec hæc sola multis animalibus reperta sunt usui futura & homini.* Plin. *lib. viii. 26.*—Also Plutarch, *De Solert.*

two species of Ibis, the white and the black. We have seen only the white ; and though Perrault says that the black ibis is oftener brought to Europe than the white, no naturalist has seen it since Belon, from whom we must give the description.

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THE EGYPTIAN IBIS.

The WHITE IBIS.

Tantalus-Ibis. Linn. and Gmel.

Ibis Candida. Briss.

The Emjefy or Ox-bird. Shaw.

The Egyptian Ibis. Lath.

THIS bird is somewhat larger than the curlew, and somewhat smaller than the stork : its length from the point of the bill to the end of the nails is about three feet and an half. Herodotus describes it as having tall naked legs ; the face and front equally destitute of feathers ; the bill hooked ; the quills of the tail and wings black, and the rest of the plumage white. To these characters we shall add some other properties not mentioned by the ancient historian : The bill is rounded, and terminates in a blunt point ; the neck is of an equal thickness throughout, and not clothed with pendant feathers like that of the stork.

Perrault described and dissected one of these birds, which had lived in the *menagerie* at Versailles. He found, on comparing it with a stork, that it was smaller, but its bill and feet proportionally longer ; that the feet of the stork were only four parts of the whole length of the

§ bird,

bird, while those of the Ibis were five parts. He observed the same proportional difference to obtain between their bills and their necks. The wings appeared very large; their quills were black, and all the rest of the plumage was white, inclined a little to rusty, and diversified only by some purple and reddish spots under the wings; the top of the head, the orbits, and the under side of the throat, were void of feathers, but covered by a red wrinkled skin; the bill was thick at the root, round, an inch and half in diameter, and curved the whole length; it was of a light yellow at its origin and deep orange near the extremity: the sides of the bill were sharp, and so hard that they might cut serpents*, which is probably the way that the bird takes to destroy them; for the tip being blunt it could scarce pierce them.

The lower part of the legs was red, and measured more than four inches; though Belon, in his figure of the black ibis, represents it as only one inch in length; both that part and the foot were entirely covered with hexagonal scales. The scales which incruited the toes were cut into tablets, and the nails were pointed, straight, and blackish. Both sides of the mid-toe were bordered by the rudiments of a membrane, which, in the two other toes, appeared only on the inside.

* *Corneo proceroque rostro. Cicero, uti supra.*

Though the Ibis is not granivorous, its ventricle is a sort of gizzard, whose inner membrane is rough and wrinkled. We have more than once remarked this incongruity in the structure of birds; in the cassowary, for instance, which does not feed on flesh, the stomach is membranous like that of the eagle *.

Perrault found the intestines to be four feet eight inches long; the heart was of a middling size, and not extremely large, as Merula pretended; the tongue, which was very short, and concealed at the bottom of the bill, was only a small cartilage invested by a fleshy membrane; which gave occasion to Solinus' remark, that this bird had no bill. The globe of the eye was small, not exceeding six lines in diameter. "This White Ibis," says Perrault, "and another which was kept at the *menagerie* at Versailles, both of them brought from Egypt, were the only birds of this kind ever seen in France." According to him, all the descriptions of the modern authors have been borrowed from the

* An interesting circumstance in this description concerns the passage of the chyle in the intestines of birds. Injections were made into the mesenteric vein of one of the storks dissected with the Ibis, and the liquor passed into the cavity of the intestines: and a portion of intestine having been filled with milk and tied at both ends, the compressed liquor passed into the mesenteric vein. Perhaps, adds the anatomist, this passage is common to all the tribe of birds; and as they exhibit no lacteal veins, we may justly conjecture, that this is the course of the chyle in passing from the intestines into the mesentery.

ancients. This remark appears to be just; for Belon did not recognize the White Ibis in Egypt, which is improbable, if he had not taken it for a stork.

[A] Specific character of the White Ibis, *Tantalus-Ibis*: "Its face is red, its bill yellow, its feet gray, its wing-quills black, its body tawny-whitish."

The BLACK IBIS.

Tantalus Niger. Gmel.*Numenius Holofericeus.* Klein.*Ibis Nigra.* Charleton.

"THIS bird," says Belon, "is somewhat smaller than a curlew *;" it is smaller therefore than the white ibis, and must also be shorter: yet the ancients assert that the two species were similar in every respect, except in colour. The present is entirely black; and Belon seems to insinuate that the front and face are covered with bare skin, by saying that the head is like that of a *cormorant*. But Herodotus, who seems to have bestowed attention on his two descriptions, does not represent the head and neck as featherless. The other characters and the habits are stated to be the same in both birds.

* "This Black Ibis is as high on legs as a bittern, and its bill is as thick as the thumb at its origin, pointed at the end, vaulted, and something curved, entirely red, as are the thighs and the legs." *Observ. de Belon*, Paris 1555. liv. ii. p. 102.

[A] Specific character of the Black Ibis, *Tantalus Niger*. "Its face, its bill, and its feet, red; its body black."

The C U R L E W S.

LES COURLIS. *Buff.*

FIRST SPECIES.

Scolopax-Arguta. Linn. and Gmel.

Numenius. Briss. Will. Klein, &c.

* *Numenius Arguta.* Lath.

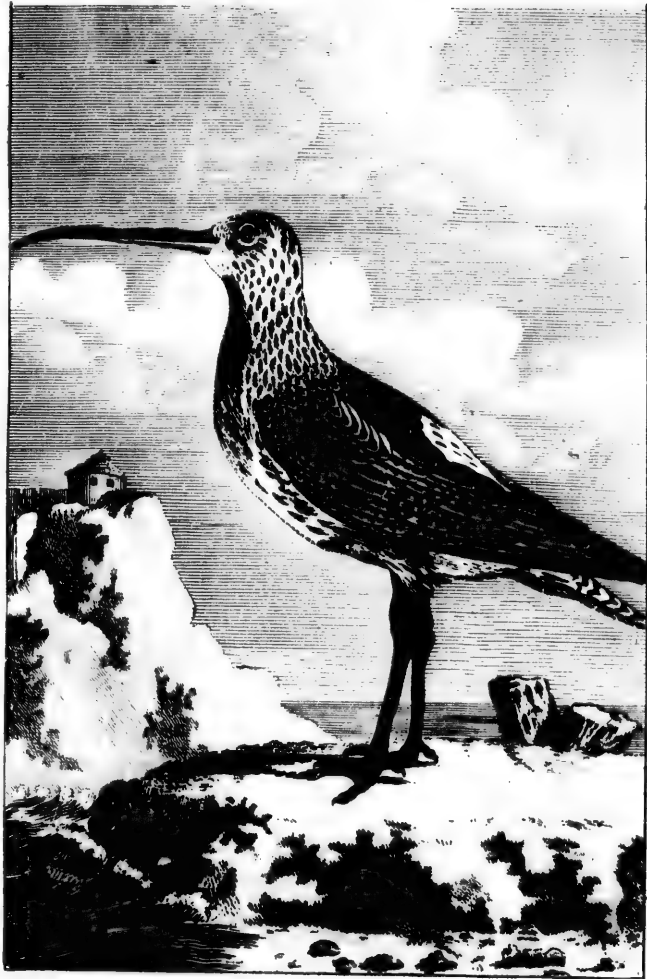
THOSE words which imitate the cries of animals are the names assigned them by nature, and are the first which men have imposed. The savage languages exhibit innumerable examples of these instinctive appellations, and they have been more or less preserved in the polished tongues; in the Greek especially, the finest and the most descriptive. Without the name *elorios*, the short description which Aristotle gives of the Curlew would be insufficient to distinguish it from other birds†. The French

* In Greek *Ελωριος*, or *Νυμηνιος*: in Latin *Numenius*, *Arguta*, *Falcinellus*: in Italian *Arcafe*, *Torquato*: in German *Wind-Vogel*, *Wetter-Vogel*, (*wind-bird*, *weather-bird*); and on the Rhine, near Strasburg, *Regen-Vogel* (*rain-bird*): in Dutch *Hanikens*: in Danish *Heel-Spove*, and *Regen-Spaaer*: in Norwegian *Lang-neel*, *Spue*: in Lapponic *Gusgastak*.

† “The *elorios* is a bird that lives near the sea, and like the rail; it feeds along the shore in fine weather.”

names

N^o. 194



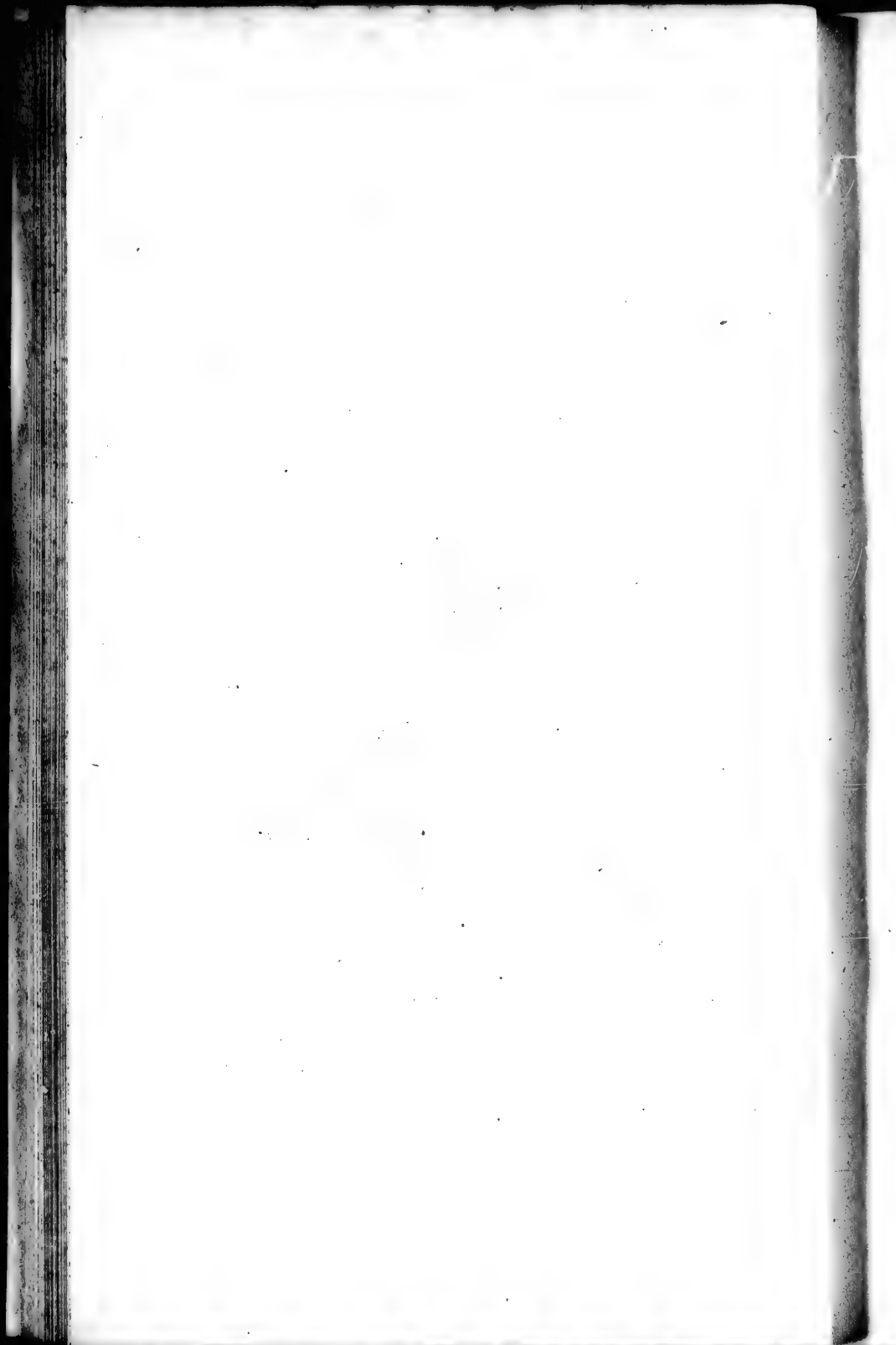
THE COMMON CURLEW.

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names *courlis*, *turlis*, are words imitative of its voice *; and in other languages, the appellations *curlew*, *caroli*, and *tarlino*, &c. mark the same relation. The epithets *arquata* and *falcinellus* allude to the hooked form of its bill †: and so also does the term *numenius*, derived from *neomenia* or new moon; because the bill resembles the moon's crescent. The modern Greeks denominate it *macrimiti*, or long nose ‡, on account of the great length of its bill compared with that of the body. The bill is slender, furrowed, equally curved throughout, and terminated in a blunt point; it is weak, and its substance tender, and calculated only to dig up the worms from the soft earth. This character might set the Curlew at the head of a numerous tribe of birds, such as the woodcocks, the snipes, the horsemen, &c. which, not being armed with a bill fit for catching or piercing fish, are obliged to subsist on the various insects and reptiles that swarm in mud and in wet boggy grounds.

The neck and feet of the Curlew are long; the legs partly naked, and the toes connected near their junction by a portion of membrane. The bird is nearly as large as a capon; its total length about two feet; that of its bill five or six inches; its alar extent more than three feet.

* Belon.

† Gesner. He gives the same derivation of the Italian *Arcafe*.

‡ Belon.

Its whole plumage is a mixture of light gray, except the belly and rump, which are entirely white; dashes of brown are interspersed over all the upper parts, and each feather is fringed with light gray or rusty; the great quills of the wing are of a blackish brown*; the feathers of the back have a silky gloss; those of the neck are downy, and those of the tail, which scarce extends beyond the wings, are, as well as the middle ones of the wing, intersected with white and blackish brown. There is little difference between the male and the female†, which is only somewhat smaller‡; and therefore the particular description which Linnæus has given of it § is superfluous.

Some naturalists have asserted, that the flesh of the Curlew has a marshy taste; but it is much prized, and ranked by several with that of the water fowls ||. The Curlew lives on earthworms, insects, periwinkles, &c. which it gathers on the sea-beach, or in the marshes and wet meadows ¶: its tongue is very short, and

* On account of the mottled plumage of the Curlews, Schwenckfeld terms them *pardales*; but unfortunately for the refinements of nomenclature, that name would rigorously exclude more than half of the species of Curlews.

† Belon.

‡ Willughby.

§ *Numenius Rudbeckii*. Fauna Suecica, N° 139.

|| Willughby and Belon.

¶ *Idem*. Willughby says, that he once found a frog in its stomach.

concealed at the bottom of the bill. Small pebbles *, and sometimes grain †, are found in its stomach, which is muscular like that of the granivorous birds ‡. The *oesophagus* is inflated like a bag, and overspread with glandulous *papillæ* §. There are two *cæca* of three or four fingers length ||.

These birds run very swiftly ¶, and fly in flocks: they are migratory in France, and hardly stop in the interior provinces; but they reside in the maritime districts, as in Poitou **, Aunis, and in Brittany along the Loire, where they breed ††. It is affirmed, that in England they inhabit the coasts only in winter, and that in summer they retire to nestle in the upland country ‡‡. In Germany they arrive in rainy weather when the wind is in a certain quarter; for the different names there applied to them allude to torrents, or tempests. They are seen also in Silesia about autumn |||, and they advance

* Gesner.

† Albin.

‡ Willughby.

§ Idem.

|| Idem.

¶ Hence probably Hesychius has erroneously applied the name *trochilus* to the Curlew, which belongs to the gold-crested wren. Clearchus indeed mentions a *trochilus*, which must be either the courier, or some of the small dunlins or collared plovers, which frequent the shores and run with speed.

** In Poitou thousands are seen entirely gray. *Salerno*.

†† Idem.

‡‡ British Zoology, and Borlase's *Nat. Hist. of Cornwall*.

||| Schwenckfeld.

in summer as far as the Baltic sea *, and the gulph of Bothnia †. They are found too in Italy and in Greece ; and it appears that their migrations extend beyond the Mediterranean, for they pass Malta twice a year, in the spring and autumn ‡. Voyagers have discovered Curlews in almost every part of the world § ; and though their accounts refer for the most part to different foreign branches of this family, it appears the European kind occurs at Senegal ||, and in Madagascar, since the bird represented,

* Klein.

† *Fauna Suecica*. Brunnich. *Ornith. Boreal*.

‡ Observation communicated by the Commander Desmazey.

§ Curlews are found in New Holland and in New Zealand.

Cook.—Numerous in the salt-marshes of Tinian. *Anson*.—In Chili. *Frezier*.—In an excursion on Statenland, we took new species of birds, among others a handsome gray curlew ; its neck was yellowish ; it was one of the most beautiful birds we had ever seen. *Forster*.—In the isle of May (one of the Cape de Verd Islands) we found curlews. *Roberts*.—The country of Napal breeds different sorts of birds . . . great numbers of ducks . . . Others are very much like our curlews, their flesh hard, but good to eat, *Dampier*.—In the bay of Campeachy there are ducks, curlews, pelicans, &c. *Idem*.—There are two sorts of curlews, that differ in bulk as well as in colour ; the largest are equal to turkey-cocks ; (this seems exaggerated) their legs are long, and their bill hooked ; they are of a dull colour ; their wings are mixed with black and white ; their flesh is black, but very good and wholesome. The English call them *double curlews*, because they are twice as large as the biggest of the others. The little curlews are of a dull brown ; their legs and their bill are the same with those of the preceding ; they are more esteemed than the others, because their flesh is more delicate. *Idem*.

|| There are many water fowl in the marshes of Senegal, such as curlews, woodcocks, teals. *Adanson*, p. 138.

N° 198, *Planches Enluminees*, is so like our Curlew, that it may be regarded as of the same species, differing only by the greater length of its bill and the distinctness of its colours. Sometimes White Curlews are to be met with *, but they are only individual varieties or accidental degradations.

* Salerne.

[A] Specific character of the Curlew, *Scolopax-Arguta*. " Its bill is arched; its feet blueish; its wings black, with snowy spots." It lays four eggs of a pale olive, marked with dusky spots. It weighs between twenty-two and thirty-seven ounces.

The WHIMBREL.

LE CORLIEU, ou PETIT COURLIS. *Buff.*

SECOND SPECIES.

Scolopax-Phæopus. Linn. and Gmel.

Numenius Minor. Briss.

Arguta Minor. Ray and Will.

* *Numenius-Phæopus.* Lath.

THE Whimbrel is one half less than the common curlew, which it resembles in its form, in the ground of its colours, and even in their distribution; it has also the same habits and mode of life. Yet they are two distinct species; for, besides their great inequality of bulk, they never associate together. The Whimbrel seems in particular to be attached to England, where, according to the authors of the British Zoology, it is more frequent than the curlews †. On the contrary, it is very rare in the provinces of France, and is probably not more common in Italy; for Aldrovandus gives

* In Italian *Tarangolo*, or *Taraniolo*: in Danish *Mellem-Sporve*: in Norwegian *Smaas Spue*.

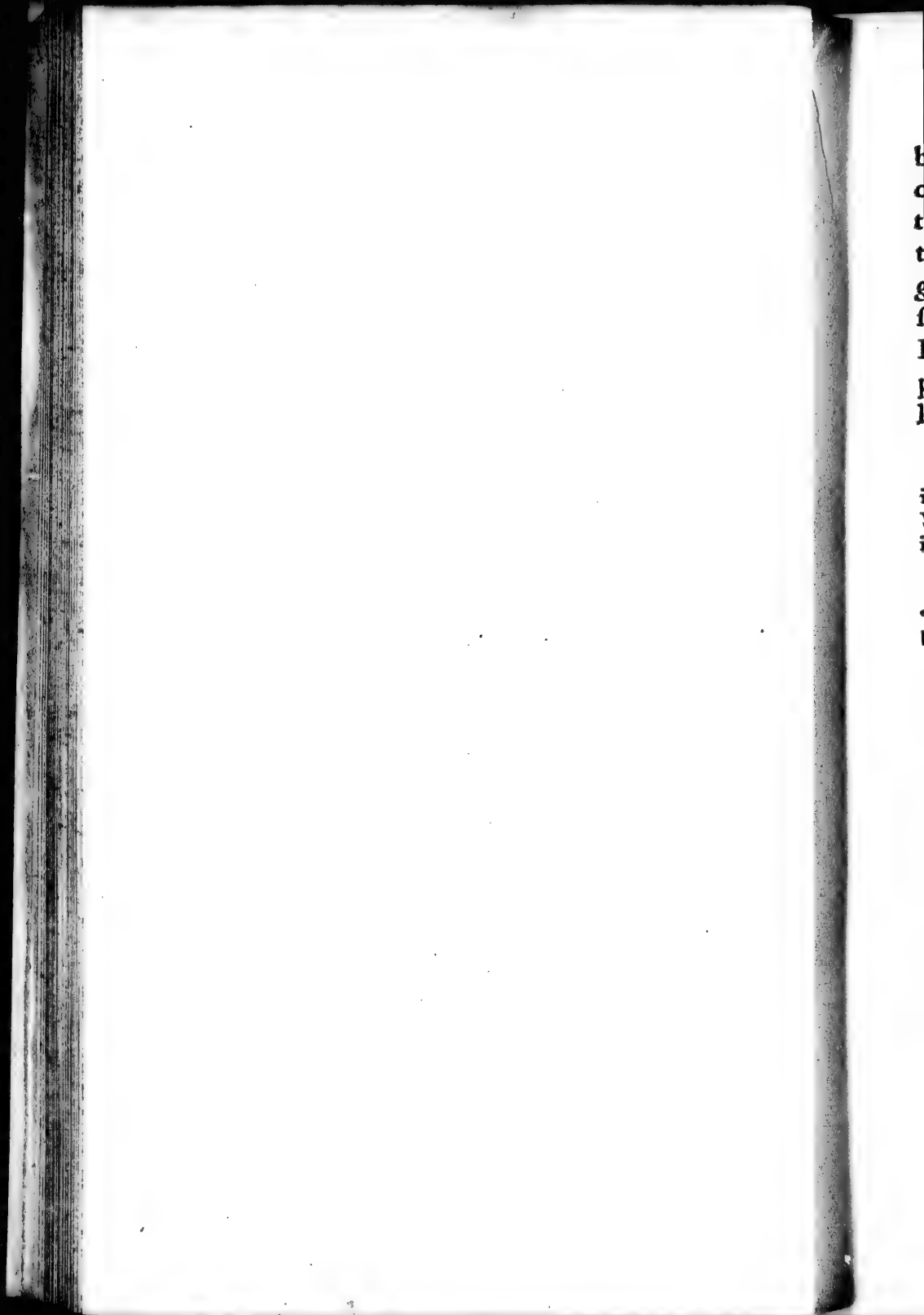
† This is a mistake; Mr. Pennant says directly the reverse "The Whimbrel is much less frequent on our shores than the "curlew."—T.

but

N^o 195



THE WHIMBREL.



but a confused account of it from Gefner, and copies the mistake of that naturalist, who introduces the Whimbrel twice among the aquatic birds, under the different names *phæopus* and *gallinula*. Willughby first noticed this oversight of Gefner's. The *little ibis* described by Edwards, is undoubtedly a Whimbrel, only its plumage is altered by moulting, as that naturalist remarks *.

* Mr. Edwards' *little ibis* is certainly a Whimbrel, only it was in moult. The bird *torea* of the Society Isles, called in Cook's *Voyage a little curlew*, seems not to belong to that family, since it is said to be found *about ships*.

[A] Specific character of the Whimbrel, *Scolopax-Phæopus*: "Its bill is arched, its feet blueish, brown rhomboidal spots on its back." Its weight exceeds not twelve ounces,

The GREEN, or ITALIAN CURLEW.

THIRD SPECIES.

Tantalus-Falcinellus. Linn. and Gmel.

Numenius Viridis. Briss.

Numenius Subaquilus. Klein.

Falcinellus. Gefn. Johnst. Will.

The Scythe Bill. Ray.

The Bay Ibis. Penn. and Lath.

THIS is nearly as large as a heron, according to Aldrovandus, and among the Italians it has sometimes that name. The appellation *falcinellus*, which that naturalist and Gefner seem to have bestowed only on this species, might be extended to all the other curlews, which have their bills equally hook-shaped. In the present, the head, the neck, the fore part of the body, and the sides of the back, are of a fine deep chestnut; the upper side of the back, of the wings, and of the tail, are green glossed with gold or bronze, according to position with regard to the light; the bill is blackish, as well as the feet and the naked part of the leg. Gefner describes only a yellow bird, which had not attained its size or its colours. This
curlew,

GREEN CURLEW.

27

curlew, which is common in Italy, occurs too in Germany *; and the Danube curlew of Marfigli, cited by Brisson, is apparently a variety of the same species.

* According to Gefner, it is called in German *Welfcher-Vogel*, (Italian bird); *Sichler* (sickler); *Sagifer* (sawyer.)

[A] Specific character of the *Tantalus-Falcinellus*: "Its face is black, its feet blue, its wings and tail violet, its body chestnut."

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THE BROWN CURLEW.

FOURTH SPECIES.

Tantalus Manillensis. Gmel.

The Manilla Ibis. Lath.

SONNERAT found this Curlew in the isle of Luçon, one of the Philippines. It is as large as the common European curlew : all its plumage is rufous brown ; its eyes are encircled with a greenish skin ; its iris flame-coloured ; its bill greenish ; and its feet of a lacker-red.

The SPOTTED CURLEW.

FIFTH SPECIES.

Scolopax Luzoniensis. Gmel.

The Luzonian Curlew. Lath.

THIS Curlew also is found in the isle of Luçon. It too resembles the European kind, only is one-third smaller. It is distinguished besides, because the crown of its head is black, and its colours differently distributed; they are scattered on the back in streaks on the edge of the feathers, and on the belly in waves or transverse breaks.

The BALD CURLEW.

LE COURLIS 'A TETE NUE. *Buff.*

SIXTH SPECIES.

Tantalus Calvus. Gmel.

The Bald Ibis. Lath.

THIS species of Curlew is new and very singular: its whole head is naked, and on the top is a sort of roll five lines thick, flattened back, and covered by a very red and thin skin, immediately under which we perceive a bony protuberance; the bill is of the same red with this crown; the top of the neck and the fore part of the throat are also bare of feathers; and the skin is, no doubt, vermilion in the living subject, but was livid in the dried specimen which we describe, and which was brought from the Cape of Good Hope by M. de la Ferté. It has entirely the form of the European curlews, only stronger and thicker; the ground of its plumage is black, and on the feathers of the wings there is a varying green and purple gloss; the small coverts of the wings are of a deep purple violet, but lighter on the back,

back, the neck, and the under side of the body ;
the feet and the naked part of the leg, for the
space of an inch, are red like the bill, which is
four inches and nine lines long. This Curlew,
measured from the point of the bill to the ex-
tremity of the tail, is two feet and an inch, and
in its natural attitude it is a foot and an half
tall.

The CRESTED CURLEW.

SEVENTH SPECIES.

Tantalus Cristatus. Gmel.

The Crested Ibis. Lath.

THE crest distinguishes this Curlew from all the rest, in which the head is more or less smooth, or covered with very short little feathers; this, on the contrary, has a fine tuft of long feathers, partly white and partly green, which fall back; the fore-side of the head, and the compass of the top of the neck, are green; the rest of the neck, the back, and the fore-part of the body, are of a fine chestnut rufous; the wings are white; the bill and feet are yellowish; a broad portion of naked skin surrounds the eyes; the neck, which is well clothed with feathers, is not so long or slender as in the other curlews. This beautiful bird is found in Madagascar.

These seven species of Curlews belong all to the ancient continent; there are eight which inhabit the new.

CURLEWS of the NEW CONTINENT.

The RED CURLEW*.

FIRST SPECIES.

Tantalus Ruber. Linn. and Gmel.*Numenius Brasiliensis Coccineus.* Briss.*Guara Brasiliensis.* Marcg. Will. Johnst. &c.*Avia Porphyrio Amboinensis.* Seba.*Numenius Ruber.* Klein.*The Scarlet Ibis.* Lath. and Penn.

THE low slimy grounds contiguous to the sea, and the great rivers of South America, are inhabited by many species of Curlews: the most beautiful of these, and the most common in Guyana, is the present: all its plumage is scarlet, except the tip of the first quills of the wing, which is black; the feet, the naked part of the legs, and the bill, are red or reddish †, and also the bare skin that covers the fore part of

* Buffon and Catesby.

† This colour of the bill may vary. Marcgrave says, that it is *cinereous-white*: Clusius, that it is *ochry-yellow*.

the head, from the origin of the bill to beyond the eyes. This Curlew is large, but not so thick as the European; its legs are taller, and its bill longer and stronger, and much thicker near the head. The female has its plumage of a fainter red than the male *, and neither of them acquires that beautiful colour till the proper age; for at first they are covered with a blackish down †, then cinereous, and afterwards white, when they begin to fly ‡, so that the fine red is introduced by successive gradations, does not appear before the second or third year, and turns brighter as the bird grows older.

These birds keep together in flocks, whether they fly or perch on trees, where their number and their flame-coloured plumage render them conspicuous objects §. Their motion through the air is steady and even rapid, but is performed only in the morning and evening; during the heat of the day they enter the creeks, and enjoy the cool shade of the mangroves; at three or four o'clock they return to the mud, which they again quit to pass the night under the branches and foliage. Seldom one of these Curlews is seen alone, or if one should happen

* Catesby.

† Marcgrave.

‡ De Laët.

§ "The guaras fly in flocks, and their scarlet plumage forms
"a very beautiful spectacle in the beams of the sun." *Hist. Gen.*
des Voy. tom. xiv. p. 304.

to stray from the flock, it hastens to join its companions. But these societies are distinguished by their age, the old birds keeping separate from the young. Their hatches begin in January and end in May; they lay their eggs, which are greenish, in the large plants that grow under the mangroves, or amidst the brambles, on some sticks collected. The young ones may easily be caught by the hand, even when the mother leads them out to search for insects and small crabs, which are their principal food: they are not wild, and they soon become reconciled to the domestic state. "I reared one," says M. de la Borde, "which I have kept upwards of two years; it fed out of my hand very familiarly, and never missed the time of dinner and supper: it ate bread, flesh either raw, dressed, or salted, fish, every thing in short was acceptable; it showed however a preference to fowls' and fishes' guts, and with that view it frequently paid a visit to the kitchen. At other times it was constantly employed seeking earth-worms, either round the house or in the garden beside the negro who was at work on the ground. In the evening it retired of its own accord into a hen-house, where it reposed with an hundred fowls: it roosted on the highest bar, and with violent strokes of its bill drove off all the hens that had occupied its place; and often during the night it took pleasure in annoying its fellow-lodgers.

“ It was roused early in the morning, and began by making three or four circuits round the house; sometimes it went to the sea-shore, but did not stop there. I never heard it utter any cry except a little croaking, which seemed to be an expression of fear at the sight of a dog or other animal. It had a great antipathy to cats, but did not fear them; ran fierce and undaunted upon them. It was killed near the house in a bog by a sportsman, who took it for a wild curlew.”

This account given by M. de la Borde, corresponds with that of Laët; who adds, that he has seen some of these birds copulate and breed in the state of domestication. We presume, therefore, that it would be equally easy and agreeable to rear and propagate this beautiful species, which would be an ornament to our court-yards*, and add perhaps to the pleasures of the table; for its flesh, which is already tolerably pleasant, might be improved, and might lose its slight marshy taste†: besides, living on the offals and garbage of the kitchen, it would cost little for maintenance.—We know not whether,

* At the time that I wrote this, there was a Red Curlew living in the menagerie of his Royal Highness the Prince of Conde, at Chantilly.

† “ It is eaten in ragouts, and makes tolerable sauce; but it must be previously half-roasted to discharge part of its oil, which has a brackish taste.” *Note given by a colonist of Cayenne.*—“ The flesh of the curlew is a dish much esteemed.” *Essay on the Natural History of Guiana*, p. 172.

as Marcgrave says, this Curlew soaks previously in water whatever it eats.

In the state of nature, these birds live on fish, shell-fish, and insects, which they find in the slime at ebb-tide. They never go very far from the sea-coast, nor advance up the rivers to a considerable distance from their mouths. They reside through the whole year in the same district, only shifting from one part to another. The species is however diffused through most of the hot countries of America *. It is found at the mouths of the *Rio-Janeiro* †, of the *Maragnon*, &c. in the Bahama Islands ‡, and in the Antilles §. The Indians of Brazil, who are fond of decking themselves with their beautiful feathers, call these Curlews by the name of *guara* ||. The appellation *flamant*, which they receive in Cayenne, refers to the flame-colour of their plumage; and the colonists have very improperly bestowed the same term on all the curlews. With equal inaccuracy the voyager Cauche confounds with it his violet Madagascar Curlew ¶.

* Catesby.

† Marcgrave.

‡ Catesby.

§ Sloane.

|| Barrere.

¶ "The herons of this country (Madagascar) have large thick bills, which bend gradually downwards after the fashion of a Polish cutlafs; their feathers are violet; the wings terminate with the tail; their thighs, as far as the knot of the leg, are covered with little feathers; their legs long and washed with gray:

"the chicken is black, and as it grows it turns cinereous, then
"white, then red, and at last columbine, or light violet: it lives on
"fish. There are similar birds in Brazil called *guara*; the figure
"occurs in Marcgravius." *Voyage à Madagascar & au Brésil*, par
Franc. Cauche, Paris 1651. p. 133.

[A] Specific character of the *Tantalus Ruber*: "Its bill, its
"face, and its feet, are red; its body blood-coloured; the tips of
"its wings black."

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The WHITE CURLEW*.

SECOND SPECIES.

Tantalus Albus. Gmel.

Scolopax Alba. Linn.

Numenius Albus. Klein.

Numenius Brasiliensis Candidus. Briss.

The White Ibis. Penn. and Lath.

WE might reckon this a red curlew having its first colour; but Catesby, who knew both, conceives it to be a different species. It is larger; its feet, its bill, its orbits, and the forefide of its head, are of a pale red; all the plumage is white, except the four first quills of the wing, which, at their extremity, are of a dull green. Great numbers of these birds arrive in Carolina about the middle of September, which is the rainy season; they frequent the low marshy grounds, where they remain about six weeks, and then disappear; retiring probably to the south, to breed in a warmer climate. Catesby says, that he found clusters of eggs in many females shortly before their departure from Carolina. They differ not from the males in regard to colours; both of them have their flesh and fat yellow, like the pheasant.

* Buffon and Catesby.

The RED-FRONTED BROWN CURLEW.

THIRD SPECIES.

- Tantalus Fuscus.* Gmel.
Scolopax Fusca. Linn.
Numenius Brasiliensis Fuscus. Briss. and Klein.
Arquata Cinerea. Barrere.
The Brown Curlew. Catesby.
The Brown Ibis. Penn. and Lath.

THESE Brown Curlews arrive in Carolina with the white curlews, and intermingled with their flocks. They are of the same size, but fewer, "*there being twenty white curlews,*" says Catesby, "*to one brown.*" They are entirely brown on the back, the wings, and the tail; brown-gray on the head and the neck; and all white on the rump and the belly: the fore part of the head is bald, and covered with a pale red skin; and the bill and feet are also of that colour. Like the white curlews, they have yellow flesh and fat. Both species arrive and depart together; they pass in winter from Carolina to the more southern climates, such as Guyana, where they are termed the *gray flamants*.

The WOOD CURLEW.

LE COURLIS DES BOIS. *Buff.*

FOURTH SPECIES.

Tantalus Cayanensis. Gmel.

The Cayenne Ibis. Lath.

THIS species, which the settlers at Cayenne denominate the *wood flammant*, lives in the forests beside the brooks and rivers, and far from the sea-coast, which the other curlews seldom ever leave. Its habits too are different; it never goes in flocks, but only in company with its mate. It fishes, sitting on wood that floats in the water. It is not larger than the green curlew of Europe, but its cry is much stronger. Over its whole plumage is spread a very deep green tint, on a dull brown ground, which at a distance appears black, and viewed near exhibits rich blueish or greenish reflections: the wings and the top of the neck have the colour and lustre of polished steel; on the back are bronze reflections, and on the belly and the lower part of the neck a purple gloss: the cheeks are bare of feathers. Brisson takes no notice of this species, though Barrère has mentioned it twice under the appellations of *arquata viridis sylvatica*, and *flammant des bois*.

[A] Specific character of the *Tantalus Cayanensis*: "Its face is dull reddish, its bill obscure; its body black, with a green gloss."

The GUARONA.

FIFTH SPECIES.

Scolopax-Guarauna. Linn. and Gmel.

Numenius Americanus Fuscus. Briss.

Numenius-Guarauna. Lath. Ind.

Guarauna. Pison. Marcg. Johnst. Ray. and Will.

The Brazilian Whimbrel. Lath. Syn.

GUARA, we have seen, is the Brazilian name of the red curlew. *Guarana* or *Guarona* is bestowed on this species, whose plumage is chestnut-brown, with green reflections on the rump, on the shoulders, and on the outer edge of the quills of the wing; the head and neck are variegated with small longitudinal whitish lines on a brown ground. This bird is two feet long from the bill to the nails*: it bears a great resemblance to the green curlew of Europe, and appears to be the representative of that species in the new world. Its flesh is tolerably good, according to Marcgrave, who says that he often ate of it. It occurs both in Brazil and in Guyana.

* Marcgrave says, that it is of the bulk of the *iacu*; but the *yacou* is scarcely so large as an ordinary hen, a size which exactly corresponds to a curlew.

[A] Specific character of the *Scolopax-Guarauna*: "Its bill is "arched and yellowish; its feet brown; its head brown striped "with white."

The A C A L O T.

S I X T H S P E C I E S.

Tantalus Mexicanus. Gmel.*Numenius Mexicanus Varius.* Briss.*Corvus Aquaticus.* Nieremb. Fernand. Will. &c.*The Mexican Ibis.* Lath.

WE abridge the name *acacalotl*, bestowed on this curlew in Mexico, into *Acalot* : it is indigenous in that country ; and, like most of the rest, its front is bald and covered with a reddish skin : its bill is blue ; the neck and back of the head clothed with feathers, which are brown intermixed with white and green ; the wings shine with green and purple reflections. And these characters have probably induced Brisson to denominate it the *variegated curlew* ; but it is easy to see, from the appellation of *water raven* given by Fernandez and Nieremberg, that these colours are laid on a dark ground approaching to black. Adanson, remarking that this bird differs from the European curlews in having its front bald, ranges it, on account of that property, with the ibis, the *guara*, and the *curicaca*, of which he makes a distinct genus. But the character by which he discriminates it from the curlews

curlews appears insufficient ; since it has in other respects a similar form, and that difference is introduced by successive gradations, insomuch that some species, the green curlews for instance, have only a bare space round the eyes, while others, such as the present Acalot, are naked on a great part of the front. We have separated the *curicaca* from the curlews, on account of its magnitude and some other essential differences, particularly the shape of its bill.—We do not understand why this learned naturalist classed these birds with the lapwings *.

* See Supplement to the Encyclopedie, article *Acacalott*.

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The SHORE MATUITUI.

LE MATUITUI DES RIVAGES. *Buff.*

S E E L ' H S P E C I I S.

Tantalus Griseus. Gmel.*Numenius Americanus Minor.* Briss.*Matuitui.* Pifon. Marcg. Will. Johnst. &c.

IF we were better acquainted with this bird, we should perhaps separate it, as well as the curicaca, from the curlews; since Marcgrave and Pifon say that it is like the curicaca, though on a smaller scale, which is disjoined from the curlews, both by its bulk and the character of its bill; and till that character be known we cannot assign its rank. We may observe, however, that the appellation of *little curlew* given by Briffon is improper, for it is nearly as large as a hen, and therefore of the first magnitude in the genus of curlews.—This Shore Matuitui differs from the other little matuitui mentioned by Marcgrave in another place, which is hardly larger than a lark, and appears to be a little ringed plover.

The GREAT CURLEW of CAYENNE.

EIGHTH SPECIES.

Tantalus Albicollis. Gmel.

The White-necked Ibis. Lath.

IT is larger than the European curlew, and seems to be the greatest of all the curlews. The whole of its upper surface, the great quills of its wings, and the fore side of its body, is brown, waved with gray and glossed with green; the neck is rusty white, and the great coverts of the wing are white. This description suffices to distinguish it from the rest of the curlews.

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THE LAPWING.

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The LAPWING.

LE VANNEAU. *Buff.*

FIRST SPECIES.

Tringa-Vanellus. Linn. and Gmel.*Capella.* Gesner.*Vanellus.* Aldrov. Ray, Will. Johnst. Sibb. &c.*Gavia Vulgaris.* Klein.*The Lapwing, Bastard Plover, or Pewit.* Alb. Will. Penn. and Lath.

THE * appellation of this bird, in modern Latin, in French, and in English, alludes to the incessant flapping of its wings. The Greeks, besides giving it other names expressive of its cry, denominated it *the wild peacock* (*Tawc αἴπιος*), on account of its crest and its elegant colours: yet this crest is very different from

* The Greeks applied to this bird the name of goat, *Αἴξ*, and *Αἴγας*, on account of its cry: in modern Latin it is for the same reason termed *Capella*; the term *Vanellus*, from *Vannus*, a fan, was given it because of the frequent and noisy flapping of its wings: and hence too the French name *Vanneau*, and the English Lapwing. In German it is called *Kwyit* and *Himmel-Geiß* (*/ky-goat*): in Swiss *Gyfitz*, *Gywitz*, *Blaw Gruner Gyfitz*: in Dutch *Kwidt*: in Portuguese *Byde*: in Polish *Czayka Kozielek*: in Swedish *Wipa*, *Korwipa Blæcka*: in Danish *Vibe Kivit*: in Turkish *Gulguruk*: in Italian *Paonzello*, or *Paronzino*, (i. e. little peacock): in many of the French provinces it is termed *dix-buit*, *piuite*, *kivite*: in some parts of England it has the appellation *pewit*: and all these names, and many others also, have nearly the same sound, and are evident imitations of the bird's cry, *pew-ew.*

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that of the peacock, it consisting only of some long unwebbed and very slender feathers; and of its plumage, the under side is white, the upper of a dark cast, and it is only when held close to the eye that we can perceive the brilliant gold reflections. In some parts of France, the Lapwing has the denomination of *dix-buit* (eighteen) because these two syllables, pronounced faintly, express, with tolerable accuracy, its cry. which many languages have endeavoured to denote by imitative sounds*. In rising up it vents one or two screams, which it often repeats at intervals as it flies, even during the night†: its wings are powerful, and much exercised; for in the air it long maintains its flight, and rises to a great height, and on the ground it springs and bounds, and skims from spot to spot.

The Lapwing is joyous, and perpetually in motion; it sports and frolics a thousand ways in the air; it assumes, at times, every imaginable posture, its belly sometimes even turned upwards or sidewise, and its wings expanded perpendicularly; and no bird wheels and flickers so nimbly.

The Lapwings arrive in our meadows in great flocks about the beginning of March, or even as early as the end of February, after the first open weather, when the wind is southerly. At this

* *Gyftz, Giawitz, Kiawitz, Czieik, &c.*

† It imitates the tremulous voice of a goat, while it flies in the night-time. *Rzaczynski.*

season

season they alight in the fields of green corn *, or in the morning cover the low marshy grounds in search of worms, which they dextrously draw from their holes : when the bird meets with one of those little clusters of pellets, or rolls of earth, which are thrown out by the worm's perforations, it first gently removes the mould from the mouth of the hole, strikes the ground at the side with its foot, and steadily and attentively waits the issue ; the reptile, alarmed by the shock, emerges from its retreat, and is instantly seized †. In the evening the Lapwings pursue a different plan ; they run along the grass, and feel under their feet the worms, which now come forth, invited by the coolness of the air : thus they obtain a plentiful meal, and afterwards they wash their bill and feet in the small pools or rivulets.

These birds are difficult to be approached, and seem to defy the fowler at a great distance : we can gain nearer them in a strong wind, for then they fly with difficulty. When they are congregated and ready to rise together, they all flap their wings with an equal motion ; and as they keep close to each other, and their

* Belon, Nat. des Oiseaux, liv. iv. 17.

† "To ascertain this circumstance," says M. Baillon, "I employed the same stratagem : in a field of green corn, and in the garden, I beat the earth for a short time, and I saw the worms coming out ; I pressed down a stake, which I then turned in all directions to shake the soil : this method, which is said to be used by the curlews, succeeds still quicker ; the worms crawled out in crowds, even at the distance of a fathom from the stake."

under side is white, the ground, which was darkened by their numbers, appears at once white. But this great society, which these birds form on their arrival, dissolves when the vernal warmth invites to love, and in two or three days they disperse. The signal is given by battles between the males; the females seem to avoid the contentions, and first abandon the flock, as if unconcerned in the quarrels: but, in fact, they draw off the combatants to form a sweeter and more intimate union, which lasts three months.

The hatch is conducted in April; it consists of three or four oblong eggs, of a dull green, much spotted with black: these are dropped in the marshes, on the little heads or clods of earth raised above the surface of the plain; a precaution which seems necessary to guard against the accidental swelling of the water, but which, however, leaves the nest exposed. To make a site for it, they are contented with cropping, close to the surface, a little round space in the grass, which soon withers about it, from the heat of incubation; and if we find the grass fresh and verdant, we may infer that the eggs have not been covered. It is said, that these eggs are good to eat, and in many provinces great quantities are gathered for market. But is it not an incroachment on the rights of nature, an invasion on her property, to destroy thus the tender germs of species which we cannot multiply?

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The eggs of domestic poultry are in a manner our own creation, but those of independent birds belong only to the common mother of all.

The incubation of the Lapwing, as in most other birds, lasts twenty days: the female sits assiduously; if any thing alarms it, and drives it from its nest, it runs a little way, cowering through the grass, and does not rise till at a good distance from its eggs, that it may not betray the spot. The old hens, whose nests have been robbed, will not again breed exposed in the marshes; they retire among the growing corn, and there in tranquillity make their second hatch: the young ones, less experienced, are not deterred by their loss, and they risk their nest a second, or even a third time in the same place; but these after-layings never exceed one or two eggs.

The young Lapwings, two or three days after being hatched, run among the grass and follow their parents: these from solicitude often betray the little family, and discover the retreat, as they flutter backwards and forwards over the fowler's head with cries of inquietude, which are augmented as he approaches the spot where the brood had squatted on the first alarm. When pushed to extremity they betake themselves to running, and it is difficult to catch them without the assistance of a dog, for they are as alert as partridges. At this age they are covered with

a blackish down, shaded under with long white hairs ; but in July they drop this garb, and acquire their beautiful plumage.

The great association now begins to be renewed : all the Lapwings of the same marsh, young or old, assemble ; those of the adjacent marshes join them, and in a short time, a body of five or six hundred are collected. They hover in the air, saunter in the meadows, and, after rain, they disperse among the plowed fields.

These birds are reckoned inconstant, and indeed they seldom remain above twenty-four hours in the same tract : but this volatility is occasioned by the scantiness of food ; if the worms of a certain haunt be consumed in one day, the flock must remove on the following. In the month of October the Lapwings are very fat, and this is the time when they live in greatest abundance ; because in this wet season the worms swarm on the surface ; but the cold winds which blow about the end of the month constrain them to retire into the earth, and thus oblige the Lapwings to pass into another climate. This is the general cause of migration in the vermivorous birds. On the approach of winter, they advance towards the south, where the rains are only begun, and, for a like reason, they return in the spring ; the excessive heat and dryness of the summer in those latitudes having the same effect as great cold in confining the worms in
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the ground*. And that the time of migration is the same throughout the whole of our hemisphere, is evinced by this circumstance, that at Kamtschatka October is denominated *the month of Lapwings*†; which, as in our latitudes, is the time of their departure.

Belon says, that the Lapwing is *known over the whole earth*; and the species is indeed widely dispersed. We have just mentioned their being found in the eastern extremity of Asia; they are met with also in the interior parts of that vast region‡, and they are seen in the whole of Europe. In the end of winter, thousands of them appear in our provinces of Brie and Champagne§, and great numbers are caught. Nets

* M. Baillon, to whom we are indebted for the best details in this history of the Lapwing, confirms our idea with respect to the cause of the return of the Lapwing from south to north, by an observation which he made himself in the Antilles. "The ground," says he, "is, during six months of the year, extremely hard and parched in the Antilles; not a single drop of rain falls in the whole of that time; I have seen cracks in the valleys four inches broad, and several feet deep; no worm can then live at the surface: accordingly, in the dry season, no vermivorous bird is observed in these islands; but on the first days after the rains set in, they arrive in swarms, and come, I suppose, from the low deluged lands on the eastern shores of Florida, from the Bahamas, and a multitude of other islands, lying north or north-west from the Antilles: all these wet places are the cradle of the water-fowl of these islands, and perhaps of a part of the great continent of America."

† *Pikis koatch*; *pikis* is the name of the bird. Gmelin.

‡ "The Lapwings are very numerous in Persia." *Lettres Edifiantes, trentieme Recueil*, p. 317.

§ "In this province, and particularly in the canton of Bassigny, they are hunted at night with flambeaux; the light wakes them, and, it is said, attracts them." *Note communicated by M. Petitjean.*

are spread in a meadow, and a few stakes and one or two live Lapwings set in the middle space to entice the birds; or the fowler, concealed in his lodge, imitates their cry with a call made of fine bark; and the whole flock, thus betrayed, alight and are ensnared. Olin mentions the course of November as the time of the greatest captures; and from his account it appears, that in Italy the Lapwings remain congregated the whole winter*.

The flesh of the Lapwing is held in considerable estimation†; yet those who have drawn the nice line of pious abstinence have, by way of favour, admitted it into the diet of mortification. This bird has a very muscular stomach, lined with an inadhesive membrane, covered by the liver, and containing, as usual, a few small pebbles; the intestinal tube is about two feet long; it has two *cæca* directed forwards, each more than two inches long; a gall-bladder adhering to the liver and the *duodenum*: the liver is large, and divided into two lobes‡; the *œsophagus* about six inches long, dilated into a bag before its insertion; the palate is rough with small fleshy points, which lie backwards; the tongue

* M. Hebert assures us, that a few remain in Brie till the depth of winter.

† It is much valued in some of the provinces: in Lorraine there is an old proverb, *Qui n'a pas mangé de Vanneau, ne sait pas ce que gibier vaut* (He that has not eaten Lapwing, knows not what game is worth).

‡ Willughby.

is narrow, rounded at the tip, and ten lines in length. Willughby observes, that the ears are placed higher in the Lapwing than in other birds.

There is no distinction, in point of size, between the male and the female, but, in the colours of the plumage, some differences occur, though Aldrovandus says, that he did not perceive any. The tints of the female are in general more dilute, and the black parts mixed with gray: its crest is also smaller than that of the male, whose head seems to be rather larger and rounder. In both the feathers are thick and well clothed with down, which is black near the body: the under side and the verge of the wings, near the shoulders, are white, and also the belly, the two outer feathers of the tail, and the first half of the rest: there is a white point on each side of the bill, and a streak of the same colour on the eye: all the rest of the plumage is of a black ground, but enriched by fine reflections of a metallic lustre, changing into green and gold-red, particularly on the head and the wings: the black on the throat and the forepart of the neck is spotted with white, but on the breast it forms alone a broad round space, and, like the black of the wings, it is glossed with bronze green: the coverts of the tail are rufous:—but as the plumage frequently varies somewhat in different individuals, it will be unnecessary to be more particular in the descrip-

tion ; I shall only observe, that the tuft is not inserted in the front, but in the back of the head, which is more graceful ; it consists of five or six delicate threads, of a jet black, the two upper ones cover the rest, and are much longer. The bill is black, pretty short and small, not exceeding twelve or thirteen lines, inflated near the point : the feet are tall and slender, and of a brown red, as well as the lower part of the legs, which is naked for the space of seven or eight lines, the outer and middle toes are joined at their origin by a small membrane ; the hind one is very short, and does not reach the ground : the tail does not extend beyond the wings when they are closed : the total length of the bird is eleven or twelve inches, and its bulk is nearly that of a common pigeon.

Lapwings may be kept in the domestic state ; “ they should be fed,” says Olina, “ with ox-heart minced in shreds.” Sometimes they are let into the gardens, where they are useful in destroying insects * : they remain contented, and never seek to escape ; but, as Klein remarks, the facility in the domestication of this bird, proceeds rather from its stupidity than its sensibility ; and that observer asserts, that the demeanour and

* “ I have often had Lapwings in my garden ; I have studied them much ; they were restless, like quails, at the time of migration, and screamed immoderately for several days. I accustomed them to live on bread and raw flesh in winter ; I kept them in a cellar, but they grew very lean.” *Note communicated by M. Baillon.*

physiognomy of both the Lapwings and plovers shew that their instincts are obtuse.

Gesner speaks of white lapwings, and of brown spotted lapwings without the tuft: but of the first his account is not sufficiently precise for us to judge whether they are not merely accidental varieties; and with regard to the second, he seems to mistake plovers for Lapwings, for he elsewhere confesses that he was little acquainted with the plover, which is extremely rare in Switzerland, while Lapwings are very frequent; and there is even a species called the Swift Lapwing.

[A] Specific character of the Lapwing, *Tringa-Vanellus*: "Its feet are red, its crest hanging, its breast black." It remains in Great Britain the whole year, though it often shifts its haunts: its eggs are sold as great delicacies, by the London poulterers, at three shillings a dozen.

The SWISS LAPWING.

SECOND SPECIES.

Tringa Helvetica. Linn. and Gmel.

Vanellus Helveticus. Briss.

Charadrius Hypomelus. Pallas.

The Swiss Sandpiper. Penn. and Lath.

THIS is nearly as large as the common lapwing; all the upper side of the body is variegated transversely with waves of white and brown; the fore-part of the body is black or blackish; the belly is white; the great quills of the wings are black, and the tail is crossed with bars like the back; it might therefore derive its denomination of Swiss Lapwing from its parti-coloured garb; which is perhaps as plausible a supposition as that it received this name from its greater frequency in Switzerland*.

Briffon makes the *ginochiella* of Aldrovandus a third species, under the appellation of the *greater lapwing* †, which little belongs to that bird,

* There is a very cogent reason for doubting whether this bird be found at all in that country, since so intelligent an observer as Gefner makes no mention of it.

† *Tringa Bononiensis.* Linn. and Gmel.

Specific character: "Its feet ochry, its head and neck bay, its body black above and white below; its throat and breast marked with ferruginous spots."

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since Aldrovandus's figure, which he says is the natural size, represents it as smaller than a common lapwing. But it is difficult to decide on the reality of a species from the sight of an imperfect figure; particularly as, unless the bill and feet be badly delineated, it cannot be a lapwing; we might rather class it with the *great plover*, or *land curlew*, of which we shall speak at the close of the article of the plovers, if the difference of its size had not opposed this arrangement. Aldrovandus, in the short account which he subjoins to his figure, says, that its bill has a sharp point, a property which belongs equally to the plover and to the lapwing: so that we shall content ourselves with just mentioning this bird, without venturing to decide its species.

[A] Specific character of the *Tringa Helvetica*: " Its bill and feet are black, its under side black, its vent white, its tail-quills white barred with black." This Lapwing is known also in the northern parts of the American continent, appearing in the spring, and retiring in September: it there lives on berries, insects, and worms,

The ARMED LAPWING of SENEGAL.

THIRD SPECIES.

Parra Senegalla. Linn. and Gmel.

Vanellus Senegalensis Armatus. Briss.

Tringa Senegalla. Lath. Ind.

• *The Senegal Sandpiper.* Lath. Syn.

THIS Senegal Lapwing is as large as the European; but its feet are very tall, and the naked part of its leg measures twenty lines, and both that part and the feet are greenish; the bill is sixteen lines long, and bears near the front a narrow membrane, very thin and yellow, hanging down tapered to a point on each side; the fore part of the body is of the same colour, but deeper; the great quills of the wing black; those next the body of a dirty white; the tail is white in its first half, then black, and at last terminating in white. This bird is armed at the fold of the wing with a little horny spur, two lines in length, and ending in a short point.

We may recognize this species in a passage of Adanson's Voyage to Senegal, from a habit which belongs, as we have remarked, to the family

family of the lapwings; that when a person appears in their haunts, they flutter about him, and follow his steps with importunate clamours. These armed lapwings are termed by the French settlers, *criers* (*criards*) and by the negroes, *uet-uet*. "As soon as they perceive a man," says Adanson, "they scream with all their force, " and flutter round him, as if to give intimation to the other birds, which, when they "hear the vociferation, make their escape by "flight: they spoil, therefore, the fowler's "sport." Our lapwings are peaceful, and never quarrel with other birds; but nature, in bestowing on those of Senegal a spur in the wing, seems to have accoutred them for battle; and they are accordingly said to employ it as an offensive weapon.

The ARMED LAPWING of the INDIES.

FOURTH SPECIES.

Parra Goensis. Gmel.

Tringa Goensis. Lath. Ind.

The Goa Sandpiper. Lath. Syn.

THIS species was sent us from Goa, and is not yet known to the naturalists: it is as large as the European lapwing, but taller and more slender; it has a little spur in the fold of each wing, and its plumage consists of the usual colours: the great quills of the wing are black; the tail partly white, partly black, and rufous at the extremity; the shoulders are covered with a purple tinge; the under side of the body is white; the throat and the fore-part of the neck are black; the top of the head, and the upper surface of the neck, are also black, with a white line on the sides of the neck; the back is brown; the eye is environed by a portion of that exuberant skin which appears more or less in all the armed lapwings and plovers, as if these two excrescences, the spur and the membranous casque, had some common, though concealed, cause.

The ARMED LAPWING of LOUISIANA.

FIFTH SPECIES.

Parra Ludoviciana. Gmel.
Vanellus Ludovicianus Armatus, Briss.
Tringa Ludoviciana. Lath. Ind.
The Armed Sandpiper. Penn.
The Louisiane Sandpiper. Lath.

THIS is a little smaller than the preceding, but its legs and feet are proportionally as long, and its spur is stronger, and four lines in length: its head is wrapped on each side with a double yellow band, placed laterally, and which, encircling the eye, is fashioned behind into a small furrow, and stretches before, on the root of the bill, in two long shreds: the top of the head is black; the great quills of the wings, too, are black; the tail the same, with a white point: the rest of the plumage is of a gray ground and tinged with rusty brown, or reddish on the back, with light reddish or flesh-colour on the throat and the fore-side of the neck; the bill and feet are of a greenish yellow.—We reckon the eighth species of Brissot, denominated *the armed*

64 LAPWING OF LOUISIANA.

armed lapwing of St. Domingo *, as a variety of the present: the proportions are nearly the same, and the differences seem to result from age or sex.

* Parra Dominica. *Gmel.*

Thus described by Brisson: "It is dilute fulvous, below inclining
" to rose-colour; its wing-quills dilute fulvous, the lateral ones in-
" teriorly verging on rose-colour; a yellow membrane on either side
" between the bill and the eye, drawn above the eye, and hanging
" downwards, its wings armed."

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The ARMED LAPWING of CAYENNE.

SIXTH SPECIES.

Parra Cayanensis. Gmel.

Tringa Cayanensis. Lath. Ind.

The Cayenne Sandpiper. Lath. Syn.

THIS is at least as large as the common lapwing, and is taller: it is also armed with a spur on the shoulder. In its colours it resembles entirely the ordinary species; its shoulder is covered with a mark of bluish gray; a mixture of that colour, with green and purple tints, is spread on the back; the neck is gray, but a broad black space occupies the breast; the front and the throat are black; the tail is partly black, partly white, as in the European lapwing; and, to complete the resemblance, this Cayenne Lapwing has on the back of its head a small tuft of five or six pretty short threads.

It appears, that a species of Armed Lapwing is found also in Chili*; and if the account given by Frezier be not exaggerated, it must

* *Parra Chilensis.* Gmel.

be more strongly armed than the rest, since its spurs are an inch long: it is also clamorous, like that of Senegal. "As soon as these birds see a man," says Frezier, they hover round him, and scream, as if to warn the other birds, which, at this signal, fly away on all sides."

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The LAPWING-PLOVER.

Tringa Squatarola. Linn. and Gmel.

Vanellus Griseus. Briss.

Pluvialis Cinerea. Aldrov. Johnst. Ray and Charleton.

Pardalus. Gesner.

Pluvialis Cinerea Flavescens. Sibb.

Gavia. Klein.

The Gray Plover. Alb. and Brown.

The Gray Sandpiper *. Penn. and Lath.

THIS bird is by Belon termed the *gray-plover*; and in fact it resembles the plover as much as the lapwing, perhaps more: it has indeed, like the latter, the small hind toe, which is wanting in the plover, a difference which has induced naturalists to separate these birds. But it must be observed that this toe is smaller than that of the lapwing, and hardly apparent; and that also it has scarce any of the colours of the lapwing. It might be regarded as a lapwing, because it has a fourth toe; or as a plover, because it has no tuft, and since its habits and its garb are those of the plovers.

Klein will not even admit that this small difference in the toes is a general character, but justly regards it as an anomaly; and he insists

* In Bornholm it is called *Floyte-Tyten*, *Dolken*.—T.

that the lapwings and plovers have so many common characters as to constitute only one great family. Accordingly, some naturalists have termed it a lapwing, others a plover : and, to compromise the matter, and retain the analogies, we have denominated it the *Lapwing-Plover*. Fowlers call it the *sea-plover*, which is an improper appellation, since it consorts with the common plovers ; and Belon takes it to be the leader of their flocks, because it has a louder and stronger voice than the rest. It is somewhat larger than the golden plover ; its bill is proportionally longer and stouter : all its plumage is light ash-gray, and almost white under the body, mixed with brownish spots on the upper side of the body and on the sides ; the quills of the wing are blackish ; the tail is short, and does not project beyond the wing.

Aldrovandus conjectures, with a good deal of probability, that this bird is mentioned by Aristotle under the name of *pardalis*. But we must observe that the philosopher does not seem to speak of it as a bird with which he was himself acquainted ; for the following are his expressions : “ The *pardalis* is said to be in a great measure a gregarious bird, and never found alone ; its plumage is entirely cinereous ; it is, in point of size, next the *molliceps* ; its pinions and feet are vigorous ; its voice not deep, but frequent *.” Add to this, that the

* Hist. Animal, lib. ix. 23.

name *pardalis* signifies a mottled plumage. All the other properties belong equally to the family of the plovers or of the lapwing.

Willughby assures us, that this bird is seen frequently in the territories of the Venetian state, where it is called *squatarola*. Marfigli reckons it an inhabitant of the banks of the Danube. Schwenckfeld inserts it in the number of Silesian birds; Rzacynski, in those of Poland; and Sibbald, in those of Scotland. Hence this species, like all the lapwings, is extremely diffused. Does Linnæus allude to any peculiarity of its history, when in one of his editions he denominates it *tringa augusti mensis* *? And does it really appear in Sweden in the month of August?—The hind toe of this bird is so small, and so little apparent, that with Brisson we shall not hesitate to refer to it the *brown lapwing* of Schwenckfeld, though he says expressly that it wants the hind toe.

To this species also we shall refer, as being closely related, the *variegated lapwing* † of Brisson. Aldrovandus gives the figure without any description; but its appellation shews that he knew the great resemblance between the two birds: all their proportions are nearly the same; the ground of their plumage differs only

* *Syst. Nat.* ed. 10. Gen. 60. Sp. 11.

† *Tringa-Squatarola*, var. *Gmel.*
Tringa Varia. Linn.

in a few tints, it being more spotted in this variegated Lapwing. Both of them, according to Brisson, haunt the sea-shore; but it is certain, from the authorities which we have cited, that these birds occur also at a distance from the coast and in inland countries.

[A] Specific character of the Gray Sandpiper: "Its bill is black, its feet greenish; its body gray, and white below." In England these birds are seen during winter in small and unfrequent flocks. They are observed also in America, flying over the meadows in the back parts of Carolina. They are very common in Siberia. Their flesh is esteemed very delicate.

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The P L O V E R S.

LES PLUVIERS. *Buff.*

THE social instinct is not bestowed on all the species of birds; but, in those which it cements, the union is firmer and more unshaken than in other animals; not only their flocks are more numerous and more constantly embodied: the whole community seems to have but one will; and the same appetites, projects, and pleasures actuate each individual. Birds are more prolific than the quadrupeds, they live in greater plenty, and their motions are performed with greater ease and celerity. The compactness of their squadrons, and the power of their voice, enable them to transfuse their sentiments and intentions, and to act by mutual concert. And the sagacity exercised in interpreting their signals begets among them affection, trust, and the gentle habits of peace and concord. The societies of quadrupeds, whether formed voluntarily in the wilds of nature, or contracted and upheld by the influence of man, cannot be compared with the congregations of the birds. Pigeons grow fond of their common dwelling;

and their attachment is the stronger - the more numerous their flock : quails assemble, and concert their migration : the gallinaceous tribes possess, even in the savage state, those social habits which domestication only nourishes and unfolds : lastly, all the birds which scatter in the woods or disperse in the fields, gather together in the autumn ; and after chearing the bright days of that late season with gay sport, they depart embodied, in quest of milder winters and happier climates. All these combinations and movements of the feathered race are conducted independently of the guidance or controul of man, though performed under his eye. But his interference in the associations of quadrupeds disunites and disperses them. The marmot, formed by nature for society, now lives solitary and exiled on the summits of mountains ; the beaver, disposed still more to friendship, and almost civilized, has been driven into the deepest wilds. Man has destroyed or prevented all union among animals : that of the horse has been extinguished, and the whole species subjected to the rein* : even the elephant has been reduced

* The horses which have grown wild on the plains of Buenos-Ayres go in large flocks, run together, feed together, and give all the marks of mutual attachment and intelligence, and of delighting in society. The same is the case with the wild dogs in Canada and other parts of North America. We can scarce doubt but that the other domestic species, that of the camel, so long reduced to subjection ; that of the ox and of the sheep, which man

has

reduced to constraint, notwithstanding his vast strength, and his constant sterility in the domestic state. The birds alone have escaped the domination of the tyrant; and their society is as free as the element which they inhabit. His attacks can destroy only the life of the individual; the species may suffer a diminution of its numbers, but its instincts, habits, and œconomy remain untouched. There are many species even which are known to us only from their social propensity, and are never seen but at the time of their general muster, when vast multitudes are assembled. Such in general are the companies of many water-fowls, and in particular that of the Plovers.

They appear in numerous bodies in the provinces of France during the autumnal rains, and from this circumstance they derive their name *. They frequent, like the lapwings, the wet bottoms and slimy grounds, where they search for worms and insects: they go into the water in the morning to wash their bill and feet, which are clotted with mud by their employment; a habit which is common also to the woodcocks, the lapwings, the curlews, and many

has disunited by degrading them with servitude; were also naturally social, and displayed in the wild state, ennobled by freedom, those tender tokens of regard and affection with which we behold them mutually soothe their slavery.

* From *pluvia*, rain. Gesner supposes it to come from *pulvis*, dust; which is much less probable, there being many other birds besides Plovers that welter in dust.

other

other birds which feed on worms. They strike the ground with their feet to elicit these, and often they extract them from their retreat *. Though the Plovers are usually very fat, their intestines are found to be so empty, that it has been supposed that they could live on air; but it is probable that the soft substance of the worms turns wholly into nourishment, and leaves little excrement. They seem however capable of supporting a long abstinence: Schwenckfeld says, that he kept one fourteen days, which during the whole time only drank some water, and swallowed a few grains of sand.

Seldom do the Plovers remain more than twenty-four hours in the same place: as they are very numerous, they quickly consume the provisions which it affords, and are then obliged to remove to another pasture. The first snows compel them to leave our climates, and seek milder regions: however, a considerable number of them remain in our maritime provinces † till the hard frosts. They return in spring ‡, and always in flocks; a single Plover is never

* Note communicated by M. Baillon, of Montreuil-sur-mer.

† In Picardy, according to M. Baillon, many of these birds continue in the neighbourhood of Montreuil-sur-mer, till the intense frosts set in.

‡ The Chevalier Desmazy informs us, that they are seen to pass Malta regularly twice a year, in spring and in autumn, with a multitude of other birds which cross the Mediterranean, and make that island their place of station and repose.

seen, says Longolius. And, according to Be-
lon, their smallest companies amount at least to
fifty. When on the ground they never rest, but
are incessantly engaged in the search of food ;
they are almost perpetually in motion : several
keep watch while the rest of the flock are feed-
ing, and on the least symptom of danger they
utter a shrill scream, which is the signal of
flight. On wing, they follow the wind, and
maintain a pretty singular arrangement ; and
thus advancing in front, they form in the air
transverse zones, very narrow and exceedingly
long : sometimes there are several of these zones
parallel, of small depth, but wide extended in
cross lines.

When on the ground these birds run much,
and very swiftly ; they continue in a flock the
whole day, and only separate to pass the night :
they disperse in the evening to a certain haunt,
where each reposes apart ; but at day-break,
the one first awake or the most watchful, which
fowlers term the *caller*, though perhaps it is the
sentinel, sounds the cry *bui, bieu, buit*, and in an
instant they obey the summons and collect to-
gether. This is the time chosen for catching
them : a clap-net is stretched before dawn fac-
ing the place where they sleep ; a number of
fowlers encircle it, and as soon as the call is
heard, they throw themselves flat on the ground
till the birds gather ; then they rise up, shout,
and throw their sticks into the air ; so that the

Plovers



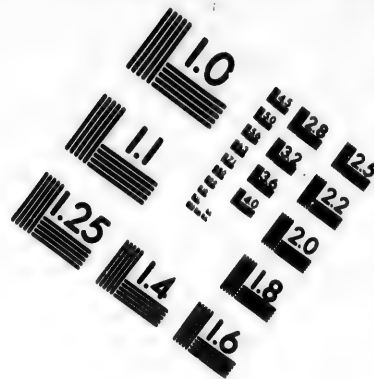
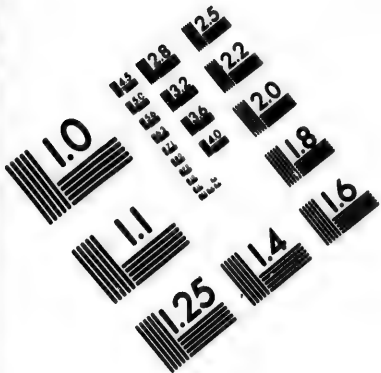
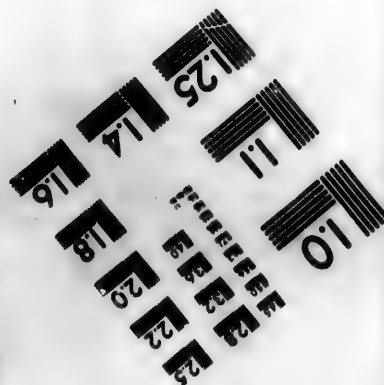
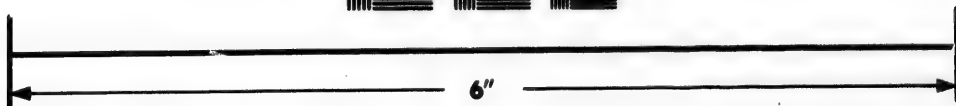
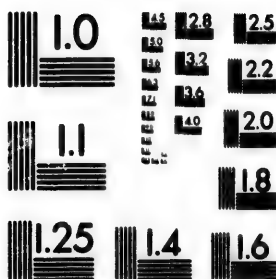


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Plovers are frightened, and hurrying away with a low flight they strike against the net, which drops upon them, and often the whole flock is taken. This plan is always attended with great success; but a single bird-catcher can in a simpler way ensnare considerable numbers: he conceals himself behind his net, and attracts the birds by means of a call of bark. They are caught in abundance in the plains of Beauce and of Champagne. Though very common in Italy, they are esteemed excellent game: Belon says, that in his time a Plover was sold often as dear as a hare; he adds, that they preferred the young ones, which he calls *guillemots*.

The chase of the Plovers, and their mode of living in that season, are almost the whole we know of their natural history. Transient guests rather than inhabitants of our fields, they disappear on the snow's falling; repass without halting in the spring, and leave us when the other birds arrive. It would seem, that the gentle warmth of that season, which awakens the dormant faculties of the other birds, makes a contrary impression on the Plovers: they proceed to the more northern countries to breed, and rear their young, for during the whole summer we never see them. Then they inhabit Lapland, and other parts of the north of Europe *, and

* See Collection Academique, *partie etrangere*, tome xi. *Academie de Stockholm*, p. 60.

probably

probably those of Asia. Their progress is the same in America; since they are common to both continents, and are observed in the spring at Hudson's Bay advancing farther north*. After arriving in flocks in those arctic tracts, they separate into pairs; and the more intimate union of love breaks, or rather suspends for a time, the general society of friendship. Hence Klein, an inhabitant of Dantzick, remarks, that the Plovers live solitary in low grounds and meadows.

The species which in our climates appears as numerous at least as that of the lapwing, is less diffused. According to Aldrovandus, fewer Plovers are caught in Italy than lapwings, and they are not found in Switzerland and other countries, where the lapwings are frequent. But perhaps the Plover, advancing farther to the north than the lapwing, gains as much territory as it relinquishes in the south. It seems also to have occupied a spacious tract in the new world, which has afforded an ample range to many species of birds, because there the temperature is more uniform throughout, and the climates more obscurely discriminated.

The Golden Plover may be regarded as the representative of the whole family of Plovers; and what we have said of their habits and œconomy refer to it: but species are included, which we proceed to enumerate and describe.

* Hist. Gen. des Voy. tom. xv. p. 267.

The GOLDEN PLOVER.

LE PLUVIER DORE'. *Buff.*

FIRST SPECIES.

Charadrius-Pluvialis. Linn. and Gmel.

Gavia Viridis. Klein.

Pluvialis Viridis. Ray, Will. and Sibbald.

Pluvialis Aurea. Briss.

Pivier. Aldrov.

Pluvialis Flavescens. Johnst.

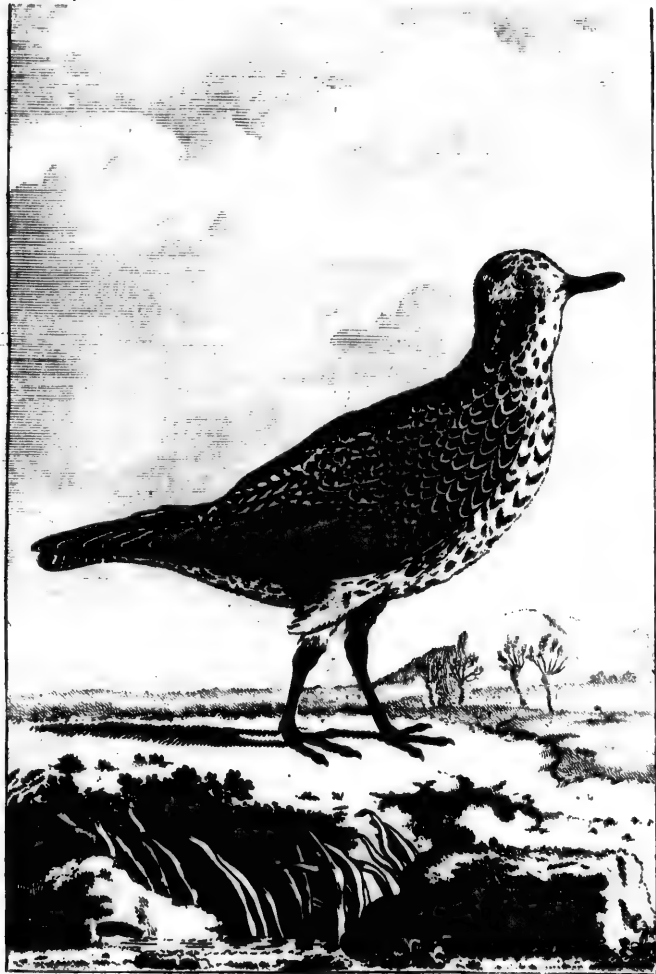
Pluvialis Flavovirens. Charleton.

* *The Golden, or Green Plover.* Penn. Lath. &c.

THE Golden Plover is as large as the turtle; its length from the bill to the tail, and also from the bill to the nails, is about ten inches: all the upper side of the body is dashed with yellow streaks, intermixed with light-gray, on a blackish brown ground; and these yellow streaks are conspicuous in the dark field, and give the plumage a golden lustre. The same colours, only more dilute, are intermingled on the throat and breast; the belly is white, the bill is black,

* In German *Pluvier*, *Pulrose*, *See-taube* (sea-pigeon), *Grunerkiwit* (green pewit): in Italian *Piavero*, *Piavero Verde*: in Polish *Ptak-leszczowy*: in Swedish *Akerboens*: in Norwegian *Akerlœ*: in Lapponic *Hutti*: in Catalonia it is called *Dorada*; and in Silesia *Brach-vogel*.

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THE GOLDEN PLOVER.

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as in all the plovers, short, rounded, and swelled at the tip; the feet are blackish, and the outer toe is connected as far as the first joint, by a small membrane, to the mid-toe; the feet have only three toes, and there is no vestige of a hind-toe or heel; which property, joined to the inflation of its bill, is regarded by ornithologists as the discriminating character of the plovers. In all of them, a part above the knee is bare; the neck short; the eyes large; the head rather too bulky in proportion to the body: qualities which belong also to all the *scolopacious* birds *, which some naturalists have ranged together under the denomination of *pardales* †; though there are many species, particularly among the plovers, whose plumage is not mottled like a panther or tiger.

There is little difference between the plumage of the male and that of the female ‡: however, the varieties, whether individual or accidental, are very frequent; so that in the same season, out of five-and-twenty or thirty Golden Plovers, we shall hardly find two exactly alike. They have more or less of yellow, and sometimes so little of it as to appear quite gray §. A few have black spots on the breast, &c.

* As the woodcocks, the snipes, the godwits, &c.

† Klein, Schwenckfeld.

‡ Aldrovandus, Belon.

§ M. Baillon, who has observed these birds in Picardy, assures us that their early plumage is gray; that at their first moult, in August

&c. These birds, according to M. Baillon, arrive on the coasts of Picardy about the end of September or the beginning of October; but in our more southern provinces they do not appear until November, or even later, and they retire in February and March *. In summer, they are seen in the north of Sweden, in Dalecarlia, and in the isle of Oëland †, in Norway, Iceland, and Lapland ‡. From these arctic regions they appear to have migrated into the new world, where they seem to be more widely diffused than in the old; for a Golden Plover, differing only in some shades from the European, is found in Jamaica §, in Martinico, in St. Domingo ||, and in Cayenne. In the southern parts of Ame-

August and September, they get some feathers, which have a yellow cast, or which are spotted with that colour; but that it is not till after some years that they acquire their fine golden tint. He adds, that the females are hatched entirely gray, and long retain that colour; that it is only when they grow old that they assume a little yellow; and that it is very rare to see them have their plumage so uniform and beautiful as that of the males. Thus we need not wonder at the variety of colours remarked in this species of birds, since they result from the difference of age and of sex. *Note communicated by M. Baillon.*

* M. Lottinger has observed the same of their passage in Lorraine.

† *Fauna Suecica.*

‡ Brunnich.

§ Sloane.

|| *Charadrius-Pluvialis, var. 2. Gmel.*

Thus described by Brisson: "Above, blackish, variegated with yellowish spots; below white; the lower part of its neck and its breast dilute gray; the edges of its quills yellowish; its tail-quills brown, spotted at the edges with yellowish white."

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rica these birds inhabit the savannas, and visit the patches of sugar-cane which have been set on fire. Their flocks are numerous, and can hardly be approached: they are migratory, and are seen in Cayenne only during the rainy season.

M. Brisson establishes a second species, which he denominates *the lesser Golden Plover* *, and as his authority, cites Gesner, who never saw the Plover himself. Schwenckfeld and Rzaczynski also mention this small species, and probably still from Gesner; for the former, though he applies to it the epithet 'little,' says, at the same time, that it is equal in bulk to the turtle; and the latter adds no particulars that imply that he observed it distinctly himself. We shall therefore consider this little Golden Plover as only an individual variety.

* *Charadrius-Pluvialis. var. 1. Gmel.*

Thus described by Brisson: "Above blackish, variegated with yellowish spots; below white; the tail-quills blackish, spotted at the edges with yellowish white."

[A] Specific character of the Golden Plover, *Charadrius-Pluvialis*: "Its body is spotted with black and green; below whitish; its feet cinereous." It lays four eggs, about two inches long, sharper than those of the lapwing, of a pale olive, variegated with blackish spots. It is often found in the winter season on our moors and heaths in small flocks.

The ALWARGRIM PLOVER.

LE PLUVIER DORE' 'A GORGE NOIRE.

Buff. *

SECOND SPECIES.

Charadrius Apricarius. Linn. and Gmel.

Pluvialis Aurea Freti-Hudsonis. Briss.

The Hawk's-eye Spotted Plover. Edw. and Bancr.

THIS species is often found with the preceding in the northern countries, where they live and propagate, but without intermixture. Edwards received this bird from Hudson's Bay, and Linnæus met with it in Sweden, in Smoland, and in the waste plains of Oëland†: it is the *Pluvialis minor Nigro-flavus*‡ of Rudbeck. Its front is white, and a small white fillet, passing over the eyes and the sides of the neck, descends before, and encircles a black mark which covers the throat: the rest of the under surface of the body is black: all the mantle is dusky brown and blackish, and speckled pleasantly with a vivid yellow, which is distributed by indented spots on the margin of

* *i. e.* Black-throated Golden Plover.

† In Smoland it is called *Myrpitta*, and in Oëland *Alwargrim*.

‡ *i. e.* The black-yellow lesser plover.

each

each feather. This Plover is as large as the preceding. We know not why the English settlers at Hudson's Bay give it the epithet of *Hawk's-eye*; whether by antiphrasis they allude to its weak eyes, or really signify that its sight is superior to that of other birds of its kind.

[A] Specific character of the Alwargrim Plover, *Charadrius Apricarius*: "Its throat and belly are black; its body dotted with brown, white, and yellow; its feet cinereous." It appears in Greenland in the spring, and lives on worms and heath-berries. In North America it breeds, and spends the summer months in the northern states. Its brilliancy has procured it the name of *Hawk's-eye* in Hudson's Bay. Its flesh is reckoned delicious.

The D O T T E R E L.

LE GUIGNARD. *Buff.*

T H I R D S P E C I E S.

Charadrius-Morinellus. Linn. and Gmel.

Pluvialis Minor, sive Morinellus. Briss.

Morinellus. Sibb. Charl. Will. &c.

Morinellus Anglorum. Gesner.

THIS bird is by some called the *little plover*.

It is indeed smaller than the golden plover, not exceeding eight inches and a half in length : the ground of its upper surface is brown-gray with a green gloss ; every feather of the back, and also the middle ones of the bill, are bordered with a rufous streak ; the upper part of the head is blackish brown ; the sides and the face are spotted with gray and white ; fore part of the neck and the breast are undated gray, rounded into a mark, under which, and near a black streak, there is a white zone, which is the distinguishing character of the male : the stomach is rufous ; the belly black ; and the abdomen white.

The Dotterel is well known for the excellence of its flesh, which is still more delicate and juicy than that of the golden plover. The species

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cies seems to be more dispersed in the north than in our climates; and, beginning with England, it extends to Sweden and Lapland *. This bird has two annual stittings, in April and in August; in which it removes from the marshes to the mountains, attracted by the black beetles, which are its chief subsistence, together with worms and small land cockles, which are found in its stomach †. Willughby describes the method of catching them practised in the county of Norfolk, where they are numerous: five or six sportsmen set out together, and when they discover the birds, they stretch a net at some distance beyond them; then they advance softly, throwing stones or bits of wood, and the indolent birds, thus roused from their sleep, stretch out one wing or one foot, and can scarce stir: the fowlers believe that they mimic whatever they see, and therefore endeavour to amuse them by extending their arm or their leg, and by this manœuvre, apparently idle ‡, to draw off their attention: but the Dotterels approach slowly

* In the sixth edition of the *Systema Naturæ*, it is denominated *Charadrius Lapponicus*.

† Letter of Dr. Lister to Mr. Ray. *Philosophical Transactions*, N^o 175. Art. 3.

‡ An author, in Gesner, goes so far as to say, that this bird, attentive to the motions of the fowler, and delighted as it were, imitates all his gestures, and forgets its own preservation, insomuch as to suffer him to approach and cover it with the net which he holds in his hand. See Aldrovandus, tom. iii. p. 540.

and with a sluggish pace to the net, which drops and covers the stupid troop.

This character of sluggishness and stupidity has given occasion to the English name *Dotterel*, and also to the Latin appellation *Morinellus* *. Klein says, that its head is rounder than that of any of the plovers, which he reckons a mark of their dullness, from the analogy to the round heads of the breed called the *foolish pigeons*. Willughby thought he could perceive, that the females were rather larger than the males, without any other exterior difference.

With regard to the second species, which Brisson reckons, of the Dotterel, under the name of the *English Dotterel*, though both birds inhabit England; we shall consider it as merely a variety. Albin represents it too small in his figure, since in his description he assigns greater weight and measures than to the common Dotterel: indeed the chief difference consists in this, that it wants the cross bar below the breast, and that the whole of that part, with the stomach and the fore side of the neck, are light-gray washed with yellowish. It appears to me therefore unnecessary to multiply species on such slight foundations.

* *Dotterel* derived from the verb *to dote*. *Morinellus* formed from *Morio*, a fool or jester.

[A] Specific character of the Dotterel, *Charadrius-Morinellus*;
 " Its breast ferruginous; a white linear bar on its eye-brows and
 " breast; its feet black." "These birds," says Mr. Pennant, "are
 " found

“ found in Cambridgeshire, Lincolnshire, and Derbyshire. On
“ Lincoln-heath, and on the moors of Derbyshire, they are migra-
“ tory, appearing there in small flocks of eight or ten only in the
“ latter end of April, and stay there all May and part of June, dur-
“ ing which time they are very fat, and much esteemed for their
“ delicate flavour. In the months of April and September they
“ are taken in Wiltshire and Berkshire downs.—At present, sports-
“ men watch the arrival of the Dotterels, and shoot them; the
“ other method (that described in the text) having been long dis-
“ used.”

The R I N G P L O V E R.

LE PLUVIER 'A COLLIER, *Buff.* *

FOURTH SPECIES.

Charadrius, seu Hiaticula †. Ald. Johnst. Sibb.

WE shall divide this species into two branches; the first is as large as a red-wing †, the second nearly equal to a lark §. And the latter must be understood to represent the Ring

* *i. e.* the Collared Plover.

† In Polish *Zolaczek*: in Swedish *Strand-pipare*, *Grylle*, *Trulls*: in Lapponic *Pago*: at Bornholm *Præste-Kræve*, *Sand-Vrister*: in Brazilian *Matuitui*,

‡ *Charadrius Alexandrinus*. Linn. and Gmel.

Charadrius Ægyptius. Linn.

Pluvialis Torquata. Briss.

Gavia Littoralis. Klein.

The Alexandrine Plover. Lath.

Specific character: "It is brown; its front, the collar on its back, and its belly, white; its lateral tail-quills on both sides bright white; its feet black."

§ *Charadrius-Hiaticula*. Linn. and Gmel.

Pluvialis Torquata Minor. Briss.

The Sea Lark. Alb. Will. and Sloane,

The Ringed Plover. Penn. and Lath.

Specific character: "Its breast brown, its front blackish with a white ring, its top brown, its feet yellow."

Plover,

N^o 198



THE RINGED PLOVER.

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Plover, as it is more diffused and better known than the former, which is perhaps only a variety.

Their head is round, their bill very short, and thick feathered at the root; the first half of the bill is white or yellow, and the tip is black; the front is white; the crown of the head has a black band, and a gray cap covers it; this cap is edged with a black fillet, which rises on the bill and passes under the eyes; the collar is white; the mantle is brown gray; the quills of the wing are black; the under side of the body is a fine white, and also the front and the collar.

Such is in general the plumage of the Ring Plover; but to describe all the diversities in the distribution and intensity of the colours were endless. Yet notwithstanding these local or individual differences, the bird is the same in almost all climates. It is brought from the Cape of Good Hope, from the Philippines*, from Louisiana, and from Cayenne†. Captain Cook found it in the straits of Magellan‡, and Ellis, at Hudson's Bay§. It is the same with what Marcgrave calls the *matuitui* of Brazil. Willughby makes that remark, and expresses his

* Sonnerat. *Voyage à la Nouvelle Guinée*, p. 83.

† At Cayenne it is called *collier*; and the Spaniards of St. Domingo, seeing it robed in black and white like their monks, termed it *frailecitos*; the Indians give it the name *thegle*, *thegle*, from its cry. *Feuillée*.

‡ At Famine Bay.

§ Near Nelson River.

surprize that there should be birds common to South America and to Europe: a fact extraordinary and inexplicable, except on the principle which we establish in treating of the water fowls; that the element which they inhabit is in all latitudes nearly of an equal temperature, and every where yields the same subsistence. We shall therefore regard the Ring Plover as one of those species which are spread over the whole globe, and derive the varieties which occur in the plumage from the influence of climate*.

The Ring Plovers inhabit the verge of waters; they are observed on the sea-shore following the tide. They run very nimbly in the strands, at times taking short flights, and always screaming. In England, their nests are found on the rocks by the coast: there they are very common, as in most of the northern countries; in Prussia †, Sweden ‡, and still more in Lapland during summer. A few of these birds are found also on the rivers, and in some of the provinces of France: they are called *gravieres* (channel-birds) and in other places

* We reckon the *Greatest Snipe* of Sloane and Ray one of the varieties. It is the *Pluvialis Jamaicensis Torquata* of Brisson, and the *Charadrius Jamaicensis* of Gmelin, who thus characterises it: "Above brown, below white; its breast black and white; its tail whitish, variegated with rufous and blackish; its collar and its feet black."

† Rzaczynski.

‡ Linnæus.

criards (screamers) which they well merit for their troublesome and continual cries during the education of their young, which lasts so long as a month or six weeks. Fowlers assure us, that they make no nests, but drop their eggs on the gravel, and that these are greenish spotted with brown. The parents lurk in holes under the projecting brinks * ; and hence ornithologists have inferred it to be the same with the *charadrios* of Aristotle, which, as the word imports, was an inhabitant of *channels*, or *gullies* † ; and whose plumage, the philosopher adds, is as disagreeable as its voice. Aristotle also says, that it comes abroad at night, and lies concealed during the day ‡ ; this remark, though not precisely applicable to the Ring Plover, has perhaps some relation to its habits, since it is heard very late in the evening. The *charadrios* was one of those birds to which ancient medicine or rather superstition ascribed occult virtues, and it was supposed to cure the jaundice: the patient needed only to look at the bird §, which at the same time turned aside its eyes as if affected by

* Klein.

† Aristophanes gives the *charadrios* the office of conveying water into the city of the birds.

‡ Hist. Animal, lib. ix. 11.

§ The vender of this excellent remedy was careful to conceal his bird, selling only the sight of it: this gave occasion to a proverb among the Greeks, applied to those who kept any thing precious or useful concealed; *imitating a charadrios*. Gesner.

the disorder *. What imaginary remedies has
human weakness sought for its real ills !

* Heliodorus, *Æthiopic. lib. iii.*

[A] The Ring Plovers are common on the British coasts in
summer, but disappear on the approach of winter.

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The NOISY PLOVER.

LE KILDIR. *Buff.*

FIFTH SPECIES.

Charadrius Vociferus. Linn. and Gmel.*Pluvialis Virginiana Torquata.* Briss.*The Chattering Plover, or Kill-Deer.* Catesby.

THE name *Kill-Deer*, which this bird has in Virginia, is expressive of its cry. It is very common in that province and in Carolina, and is detested by the fowlers, because its clamours scare away every other sort of game. There is a good figure of this bird in Catesby's work : it is as large, he says, as the snipe ; its legs tall ; all its upper surface is brown-gray ; and the top of its head is hooded with the same colour ; its front, its throat, the under side of its body, and the compass of its neck, are white ; the lower part of the neck is encircled by a black collar, below which is a white half collar : there is also a black bar on the breast, which stretches from the one wing to the other ; the tail is pretty long, and black at the extremity ; the rest of it, and the superior coverts, are of a rufous colour ; the feet are yellowish ; the bill is black ; the eye

is

is large, and environed with a red circle. These birds remain the whole year in Virginia and Carolina; they are found too in Louisiana*. No difference can be perceived in the plumage between the male and the female.

A species akin to this, perhaps the same, is the collared plover of St. Domingo†, which requires no other description; the only difference lies in the colours of the tail, and the deeper tint of the wings.

* Dr. Mauduit has received it from that country, and preserves it in his cabinet.

† *Charadrius Vociferus*, var. Gmel.

Charadrius Torquatus. Linn.

Pluvialis Dominicensis Torquata. Briss.

Briffon says, "that the two middle quills of the tail are gray-brown, tawny at the tip; the two next on either side gray-brown, black near the tip, and the tip itself white; the outmost white at its origin, striped transversely with blackish."

[A] Specific character of the Noisy Plover, *Charadrius Vociferus*: "It has black bars on its breast, its neck, its front, and its cheeks; its tail is yellow, with a black bar; its feet bright yellow."

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The CRESTED PLOVER.

LE PLUVIER HUPPE'. *Buff.*

SIXTH SPECIES.

Charadrius Spinofus, var. Linn.

Pluvialis Persica Cristata. Briss.

The Black-breasted Indian Plover. Edw.

THIS Plover, which is found in Persia, is nearly as large as the golden plover, but somewhat taller; the feathers on the crown of the head are black, glistening with green; they are collected into a tuft, which reclines, falls back, and is about an inch long; the cheeks, the back of the head, and the sides of the neck, are marked with white; all the upper surface is deep chestnut; a black streak descends from the throat upon the breast, which, as well as the stomach, is black, with a fine violet gloss; the lower belly is white; the tail is white at its origin, and black at its extremity; the quills of the wing, too, are black, and the great coverts are marked with white.

This Plover is armed with a spur on the wing. The female is distinguished from the male; all its throat being white, and its black not shaded by any admixture.

The SPUR-WINGED PLOVER.

LE PLUVIER A' AIGRETTE. *Buff.*

SEVENTH SPECIES.

Charadrius Spinosus. Linn. and Gmel.*Pluvialis Senegalenfis Armata.* Briss.

THE feathers on the back of the head extend into threads, as in the lapwing, and form a tuft more than an inch long: it is of the bulk of the golden plover, but taller, measuring a foot from the bill to the nails, and only eleven inches from the bill to the end of the tail; the top of the head, the tuft, the throat, and the mark on the stomach, are black, and also the great feathers of the wing, and the tips of those of the tail; the upper surface is brown gray; the sides of the neck, the belly, and the great coverts of the wing, are white tinged with fulvous: the spur on the fold of the wing is black, strong, and six lines long. This species is found in Senegal, and occurs too in the hot parts of Asia; for we received one from Aleppo.

[A] Specific character of the Spur-winged Plover, *Charadrius Spinosus*: "Its wing-quills, its breast, and its feet, are deep black; the back of its head crested; its tail-quills half white; its basal wings armed with spurs."

The HOODED PLOVER.

LE PLUVIER COIFFE'. *Buff.*

EIGHTH SPECIES.

Charadrius Pileatus. Gmel.

A PORTION of yellow membrane passes on the front, and by its extension encircles the eye; a black hood, stretched behind into two or three shreds, covers the top of the head; the nape is white, and a broad black chin-piece, rising under the eye, envelopes the throat, and encircles the top of the neck: all the fore side of the body is white; the upper side of the body is rusty gray; the quills of the wing, and the end of the tail, are black; the feet are red, and there is a spot of the same colour near the point of the bill. This Plover is found in Senegal, like the preceding, but is a fourth smaller, and has no spur in the wing. The species is new. .

The CROWNED PLOVER.

NINTH SPECIES.

Charadrius Coronatus. Gmel.*The Wreathed Plover.* Lath.

THIS is one of the largest of the Plovers ; it is a foot long, and its legs are taller than the golden plover ; they are rusty-coloured ; the head is hooded with black, in which there is a white band, which encompasses the whole of the head, and forms a sort of crown ; the fore side of the neck is gray, and the gray colour of the breast is intermingled with black in coarse waves ; the belly is white ; on the first half of the tail, and at its extremity, a black bar crosses the white ; the quills of the wing are black, and the great coverts white ; all the upper surface is brown, glossed with greenish and purple. It is found at the Cape of Good Hope.

The WATTLED PLOVER.

LE PLUVIER A' LAMBEAUX. *Buff.*

TENTH SPECIES,

Charadrius Bilobus. Gmel.

THE character from which we have derived the name of this bird, is a yellow membrane adhering to the corners of the bill, and hanging from the two sides in pointed wattles. It is found in Malabar: it is of the bulk of the ordinary plover, but its legs are taller, and of a yellowish cast; behind the eyes there is a white streak, which edges the black hood of the head; the wing is black, and spotted with white on the great coverts; there is also black bordered with white on the tip of the tail; the upper surface, and the neck, are fulvous gray, and the under side of the body is white: this is the common, and, we might say, the uniform plumage of most of the Plovers.

The ARMED PLOVER of CAYENNE.

ELEVENTH SPECIES.

Charadrius Cayanus. Lath.

THIS is a Ring Plover, like the common one, but much taller: its bill, too, is longer, and its head not so round; a broad black band covers the front, incloses the eyes, and joins into the black which stains the back of the neck, the top of the back, and gathers into a round mark on the breast: the throat is white, and also the fore side of the neck, and the under side of the body; a gray space, with a white edging, forms a hood behind the head; the first half of the tail is white, and the rest is black; the quills of the wings and the shoulders are black also; the rest of the upper surface is gray mixed with white; the spurs are pretty long, and inserted in the fold of the wings.

It appears to us, that the *amacozque* of Fernandez, a noisy bird, the plumage mixed with white and black, and a double collar, which is seen the whole year on the lake of Mexico, where it lives on aquatic worms, is a Plover: we could have decided the question, had Fernandez given the character of the feet.

The PLUVIAN.

Charadrius Melanocephalus. Gmel.
The Black-headed Plover. Lath.

IT is scarce equal to the little ringed plover, but its neck is longer and its bill stronger: the upper side of the head, of the neck, and of the back, is black; and there is a streak of the same colour on the eyes, and some black waves on the breast: the great quills of the wing are mixed with black and white: the other parts of the wing, the middle quills and coverts, are of a handsome gray; the fore side of the neck is rusty white, and the belly white; it has three toes, like the plover, but the bill is larger and thicker, and the inflation is more perceptible. These differences seem to constitute a shade in the genus, and I have therefore given it a distinct name.

The GREAT PLOVER*.

Charadrius-Oedienemus. Linn. and Gmel.

Pluvialis Major. Briss.

Otis-Oedienemus. Lath.

Oedienemus. Belon, Aldrov. and Johnst.

Charadrius. Gefner.

Fedoa Nostra Tertia. Ray.

The Stone Curlew. Will.

The Norfolk Plover. Penn.

The Thick-knee'd Bustard. Lath.

THERE are few persons who reside in the provinces of Picardy, Orleanois, Beauce, Champagne, and Burgundy, but must have heard in the fields, in the evening, during the months of September, October, and November, the repeated cries *tũrrlui, tũrrlui*, of these birds: this is their call, which often re-echoes from hill to hill; and as it resembles the articulated sound of the curlew, it has probably given occasion to the appellation of land curlew (*courlis de terre.*) Belon says, that at first sight it appears so like the little bustard, that he gave it the same name. But it is neither a curlew nor a bustard: it is rather a plover, though

* In France it is commonly called *Courlis de Terre*, and on the coasts of Picardy *St. Germer*. In Italy it is termed *Coruz*, according to Gefner and Aldrovandus; and at Rome *Carlotta*, according to Willughby: in some parts of Germany *Triel*, or *Griel*, according to Gefner.

N^o 199



THE THICK KNEED BUSTARD.

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it has several peculiar features and habits, that disjoin it from the other species.

This bird is much larger than the golden plover, and even exceeds the woodcock: its thick legs have a remarkable swelling below the knee; for which reason Belon has applied the epithet *ædicnemus* *. Like the plover it has only three toes, which are very short: its legs and feet are yellow; its bill yellowish from the origin to the middle, and from thence blackish to the extremity; and is of the same shape with that of the plover, only thicker: all the plumage is of a light gray and rusty-gray ground, and speckled with dashes of brown and blackish, the strokes very distinct on the neck and breast, and more confused on the back and the wings, which are crossed with a whitish bar: two streaks of rusty white pass above and below the eye: the ground is rusty colour on the back and neck, and white under the belly, which is not speckled.

This bird has great power of wing; it springs at a distance, especially in the day-time, and flies pretty near the ground: it runs on the sward and in the fields, as swiftly as a dog; and hence, in some provinces, it has been termed *the surveyor* (arpenteur.) After running, it stops short, holding its body and head still †; and on

* Formed from οἰδέν, to swell, and κνήμην, the upper part of the leg or knee.

† Albin.

the least noise it squats on the ground. Flies, beetles, small snails, &c. are its chief food, together with some other insects that are found in fallow grounds, such as crickets, grasshoppers, &c. * : for it constantly inhabits the brows of banks, and prefers the stony, sandy, and dry spots. In Beauce, Salerne tells us, bad land is called *curlew-land*. These birds, solitary and tranquil during the day, begin to stir on the approach of the evening; then they spread on all sides, flying rapidly, and crying on the heights with all their might: their voice, which is heard at a great distance, resembles the sound of a third flute, dwelling on three or four tones, from a flat to a sharp. This is the time that they approach our dwellings †.

These nocturnal habits seem to shew, that this bird sees better in the night than in the day; yet is its sight very acute in the day-time: the position too of its large eyes enables it to see as well before as behind: it descries the sportsman at a good distance, so that it can rise and escape before he gets within shot of it. It is as wild as it is timorous; fear alone confines it during the day, and permits it not to come abroad or utter its cries till night: and so invincible is its timidity, that if a person enter the

* M. Baillon, who has observed this bird on the coasts of Picardy, informs us, that it also eats little black lizards, which it finds on the downs, and even small adders.

† Sloane.

room where it is kept, it endeavours to conceal itself, or sneak off, and runs against whatever happens to be in its way. It is said, that this bird foresees the changes of the weather, and announces rain: Gesner remarks, that even when confined, it is much disturbed before a storm.

This Great Plover, or Stone Curlew, forms an exception to the numerous species, which having a part of their leg naked, are reckoned inhabitants of shores and boggy grounds; since it keeps ever at a distance from water or marshes, and resides in dry upland situations*.

These are not the only habits in which they differ from the plovers. The seasons of their migrations are not the same; for they retire in November, during the latter rains of autumn, having, previous to their departure, which commences at night †, collected at the call of their leader, in flocks of three or four hundred; and they return early in the spring, being seen in the end of March in Beauce, Sologne, Berry, and some other provinces of France. The female lays only two, or sometimes three eggs, on the naked ground, between stones ‡, or in a small hole which she forms in the sand of heaths or

* We may hence see with what little reason Gesner took it for the *charadrius* of Aristotle, which is decidedly a shore bird. See the article of the *Ring-Plover*.

† Salerne.

‡ Idem.

downs.

downs*. The male pursues her eagerly in the love season; he is as constant as he is ardent, and never deserts her: he assists in leading the young, and instructing them to distinguish their food. The education is tedious; for though the brood can soon walk after they are hatched, it is a considerable time before they have strength sufficient to fly. Belon found some that could not use their wings in the end of October; which induced him to suppose that the eggs are laid at a late season. But the Chevalier Desmazy, who observed these birds at Malta†, informs us, that they have regularly two hatches, one in the spring, and another in the end of August. He also assures us, that the incubation lasts thirty days. The young ones are excellent game, and the adults likewise are eaten, though their flesh is blacker and dryer. The chase of

* During the eight days which I wandered on the dry sands that cover the sea-shore from the mouth of the Somme to the extremity of the Boulonnois, I met with a nest which appeared to be that of the *saint-germer* (stone-curlew). To ascertain this, I remained sitting on the sand till evening, having raised a little hillock in front to conceal myself. The birds which inhabit those sands being accustomed to see the surface perpetually changed by the wind, are not in the least disturbed at finding new cavities or elevations. My trouble was recompensed: in the evening the bird came to her eggs, and I recognized it to be the *saint-germer*, or stone-curlew: her nest placed exposed on a flat in a sand-plain, consisted only of a little hole of an inch, and of an elliptical shape, containing three eggs, pretty large, and of a singular colour. *Observation made by M. Baillon, of Montreuil-sur-mer.*

† In Malta it is called *tolaride*.

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the stone curlews was reserved in Malta for the master, before the introduction of our partridges, about the middle of last century*.

These birds do not, like the plovers, advance into the north in summer; at least Linnaeus has not inserted them in his *Fauna Suecica*. Willughby assures us, that in England they are found in Norfolk and in Cornwall; yet Charleton, who gives himself out for an experienced sportsman, confesses that he never met with any. Indeed, the wild disposition of the stone curlew, and its retirement during the day, might long conceal it from the eyes of observers; and Belon, who first discovered it in France, remarks that no person could then tell him its name.

I had one of these birds a month or five weeks at my house in the country. It fed on soup, bread, and raw flesh, and preferred the last. It ate not only in the day-time, but also at night; for its provision, when given in the evening, was observed to be diminished next morning.

This bird seemed to me of a peaceful temper, but timorous and wild; and I am induced to think that this is really the case, as it is seldom seen in the day, and prefers the obscurity of night for its associations. I observed, that as soon as it perceived a person, even at a distance, it endeavoured to escape, and was so overcome with fear, as to hurt itself in the flurry. It is, therefore, one of those birds which nature has

* In the time of the grand master, Martin de Redin.

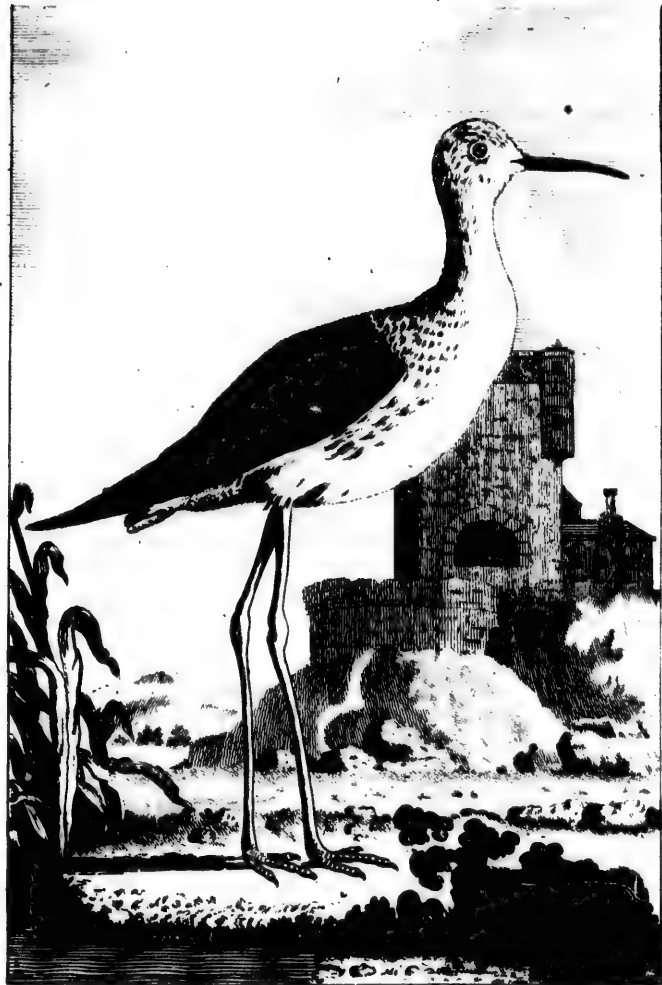
destined

destined to live remote from us, and has endued with the instinct for that purpose.

The one which I mention uttered no cry ; it only made, two or three nights before its death, a sort of feeble whistle, which was perhaps an expression of pain, for the root of its bill and its feet were much gashed, owing to its violent struggling in the cage, at the sight of any new object.

[A] Specific character of the Thick-knee'd Bustard, *Charadrius Oedienemus* : " It is gray ; its two primary wing-quills black, and in " the middle white ; its bill sharp ; its feet cinereous." These birds are very frequent in Norfolk ; they breed in rabbit burrows ; their eggs are olive, with reddish spots.

N^o 200



THE LONG LEGGED PLOVER

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The LONG-SHANK.

L'ECHASSE*. *Buff.**Charadrius Himantopus* †. Linn. and Gmel.*Charadrius Autumnalis*. Hassel.*Himantopus*. Aldrov. Will. Sibb. Klein, &c.*Hemantopus*. Gefner.*The Long-legs*. Ray and Sloane.*The Long-legged Plover*. Penn. Lath. &c.

THE Long-Shank is among the birds what the jerboa is among the quadrupeds: its legs, which are thrice as long as the body, present a monstrous disproportion. Such extravagant and random productions of nature exhibit the traces of her magnificent and boundless plan; and, like shades in a picture, they heighten by their contrast the beauty of the scene. The enormous length of this bird's legs will hardly allow it to reach the earth with its bill to gather

* i. e. Stilts.

† In Greek *ἱμαντοπύς*, from *ἱμάς*, a thong, and *πύς*, the foot; so termed because of its slender legs. Pliny only writes the same name in Roman characters, *himantopus*, which the moderns have copied. In Italian it is called, according to Belon, *Merlo Aquaiolo Grande* (the great water black-bird) in Flemish *Matheen*: in German *Froemder Vogel*, (the foreign bird) and also, according to Sibbald, *Dunn Bein* and *Riemen Bein* (dun-shank and thong-shank). In Jamaica it has the appellation of *long-legged crane*.

its

its food ; they are also slender, weak, and tottering* ; and its three toes are disproportionally small, and give a base too narrow for its tall body. Hence the names of this bird in the ancient and modern languages refer to the softness and pliancy of its legs, and to their extreme length.

The slow laborious pace of this bird † seems however to be compensated by its power of flying. Its wings are long, and extend beyond its tail, which is pretty short ; their colour, as well as that of the back, is glossed with greenish blue ; the back of the head is brown-gray : the upper side of the neck is mixed with blackish and white : all the under surface is white from the throat to the end of the tail : the feet are red, and eight inches high, including the naked part, which is three inches : the protuberance of the knee is strongly marked on its smooth, slender legs : the bill is black, cylindrical, a little flat at the sides near the point, two inches and ten lines long, close inserted on an elevated front, which gives the head a round shape.

We are little acquainted with the habits of this bird, whose species is scanty and rare ‡. It

* Aldrovandus, tom. iii. p. 444.

† *Incessus, nisi æquali alarum expansione librata sit, difficilis videtur in tantâ crurum & pedum longitudine & exilitate.* Sibbald.

‡ We received a Long-Shank from Beauvoir, in Lower Poitou, as an unknown bird ; which proves that it seldom appears on those coasts : this was killed in an old salt-pit ; it was remarked in flying to stretch its legs backwards eight inches beyond the tail.

probably

probably lives on insects and worms, at the verge of streams and marshes. Pliny mentions it under the name *himantopus*, and says, "that it is a native of Egypt, and subsists chiefly on flies, and has never been kept more than a few days alive in Italy*." Yet Belon speaks of it as an inhabitant of France; and the Count Marfigli saw it on the Danube. It appears also to frequent the northern countries; for though Klein says that he never saw it on the coasts of the Baltic, Sibbald did in Scotland, and has accurately described one that was killed near Dumfries†.

The Long-Shank occurs also in the new continent. Fernandez saw a species or rather a variety in New Spain; and he says that this bird, an inhabitant of cold countries, does not descend till winter to Mexico; yet Sloane ranks it among the Jamaica birds. It follows from these apparently contradictory authorities, that the species of the Long-Shank, which contains exceedingly few individuals, is diffused or rather dispersed, like that of the ring plover, in very remote countries.—The Mexican Long-Shank, indicated by Fernandez, is rather larger than that of Europe; it has a mixture of white in the black of its wings; but these differences

* Lib. x. 46. Oppian likewise calls it *himantopus*. (*Exegetic. lib. ii.*)

† *Scotia Illustrata*, par. II. lib. iii. p. 19.

seem insufficient to constitute a distinct species *.

* *Comaltecatl*. Fernandez.

Himantopus Mexicanus. Briff.

[A] Specific character of the Long-Shank, *Charadrius Himantopus*: " It is white, its back black; its bill black, and longer than its head; its feet red, and very long " This singular bird is extremely rare in Britain. Sir Robert Sibbald gives a very full description of one shot at a lake near the town of Dumfries; and Mr. White has lately described another shot on the verge of Frinsham-pond in Surrey: both of them have given engravings of the bird; but in Sibbald's figure the bill is represented quite straight, and in White's it is somewhat bent inwards.

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The OYSTER-CATCHER*.

L'HUITRIER ; *vulgairement* LA PIE DE MER.
Buff.

Hæmatopus Ostrægus. Linn. and Gmel.

Scolopax Pica. Scopol.

Hæmatopus. Bel. Aldrov. Johnst. Sibb. &c.

Pica Marina. Charleton.

Ostræga. Briss.

The Sea Pie. Alb.

The Pied Oyster-catcher. Lath.

THOSE birds which disperse in our fields or retire under the shade of our forests, inhabit the most enchanting scenes, and the most peaceful retreats of nature. But such is not the lot of all the feathered race : some are confined to the solitary shores ; to the naked beach, where the billows dispute the possession of the land ; to the rocks, on which the surges dash and roar ; and to the insulated shelving banks which are beaten by the murmuring waves. In these desert stations, so formidable to every other being,

* In French *Pie de Mer* (sea-pie) and sometimes *Becasse de Mer* (sea-woodcock.) In Gothland it is called *Marspitt* : in the isle of Oëland *Strand/h Jura* : in Norway *Tield*, *Glib*, *Strand-skuire*, *Strand-skade* : in the Feroe islands *Kielder* : in Iceland the male is named *Tilldur*, and the female *Tilldra*.

a few birds, such as the Oyster-catcher, obtain subsistence and security, and even enjoy pleasure and love. It lives on sea-worms, oysters, limpets, and other bivalves, which it gathers on the sand of the sea-shore: it keeps constantly on the banks, which are left dry at low water, or on the little channels, where it follows the reflux tide; and never retires farther than the sandy hillocks which limit the beach. This bird has also been called the *sea-pie*, not only on account of its plumage, which is black and white, but because it makes a continual noise or cry, especially when it is in flocks: this cry is shrill and abrupt, repeated incessantly whether at rest or on the wing.

This bird is seldom seen on most of the French coasts; yet it is known in Saintonge *, and in Picardy †. In the latter province it sometimes breeds, and arrives in very considerable flocks when the wind is at east or north-west. They repose on the sand of the beach, waiting for a fair wind to waft them to their usual abode. They are believed to come from Great Britain, where they are indeed very common, particularly on the eastern coasts of that island ‡. They also advance farther north; for they are found in Gothland, in the isle of Oë-

* Belon.

† Note communicated by M. Baillon, of Montreuil-sur-mer.

‡ Willughby.

land,

land *, and in the Danish islands, as far as Norway † and Iceland. On the other hand, Captain Cook saw them on the coasts of *Terra del Fuego*, and near the Straits of Magellan ‡. They have been discovered at Dusky Bay in New Zealand: Dampier remarked them on the shores of New Holland; and Kämpfer assures us, that they are as common in Japan as in Europe. Thus the Oyster-catcher inhabits all the shores of the ancient continent; and we need not be surprized to find it in the new. Father Feuillée observed it on the east of *Terra Firma*: Wafer at Darien: Catesby at Carolina and the Bahama Islands: Page du Pratz at Louisiana §. And this species, so diffused, has no variety, but every where the same, and disjoined from all others. None indeed of the shore birds has, with the stature of the Oyster-catcher, and its short legs, the same form of bill, or the same habits and œconomy.

* *Fauna Suecica*, N° 161.

† Brunnich, *Ornithol. Borealis*, N° 189.

‡ "Sea-pies or black Oyster-catchers inhabit, with many other birds, the verge of these coasts, surrounded by immense floating beds of sapphire on the east point of *Terra del Fuego*, and of the Strait."—*Cook's second Voyage*.

§ "The hatchet-bill is so called, because its bill is red, and fashioned like the head of an hatchet: its feet are also of a very fine red, for which reason it is often named *red-foot*. As it lives wholly on shell-fish, it frequents the sea-side, and is never seen on the land, except before some great tempest, which its retreat announces." Le Page du Pratz. *Histoire de la Louisiane*, tom. ii. p. 117.

This bird is as large as the crow; its bill four inches long, contracted, and, as it were, compressed vertically above the nostrils, and flattened at the sides like a wedge as far as the tip, whose square section forms a cutting edge *: a structure peculiar to itself, and which enables its bill to raise up and detach the oysters, limpets and other shell-fish from their beds and rocks.

The Oyster-catcher is one of those few birds which have only three toes. This single circumstance has led systematic writers to range it next the bustard. Yet it is apparent how wide is the separation in the order of nature; for not only this bird haunts the sea-shores, it even swims, though its feet are almost entirely devoid of membranes. It is true that, according to M. Baillon, who observed the Oyster-catcher on the coasts of Picardy, its method of swimming is merely passive, but it has no aversion to repose on the water, and leaves the sea for the land whenever it chooses.

Its black and white plumage, and its long bill, have given occasion to the inaccurate appellations of *sea-pie* and *sea-woodcock*: the name *Oyster-catcher* is proper, since it expresses its mode of subsisting. Catesby found oysters in its stomach, and Willughby entire limpets. The organ of digestion is spacious and muscular, according to

* Le Page du Pratz, *ut supra*.

Belon;

Belon; who adds, that the flesh of the bird is black and hard, and of a rank taste. Yet M. Baillon avers, that the Oyster-catcher is always fat in the winter, and that the young ones are tolerably pleasant food. He kept one more than two months in his garden, where it lived chiefly on earth-worms like the curlews, but also ate raw flesh and bread, with which it was well content. It drank indifferently either salt or fresh water, without shewing the least preference to either; yet in the state of nature these birds never inhabit the marshes or the mouths of rivers; they remain constantly on or near the beach; probably because fresh waters do not afford the proper subsistence.

The Oyster-catcher makes no nest; its eggs, which are grayish and spotted with black, it lays on the naked sand, out of the reach of the tide, but without any preparation for their reception; it only seems to select a high spot, strewed with fragments of shells. The number of eggs is usually four or five, and the time of incubation is twenty or twenty-one days: the female does not cover them assiduously; she seems, in this respect, to do as most of the birds that inhabit the sea-shores, and to leave the hatch to the sun's heat part of the day, leaving her charge at nine or ten o'clock of the morning, and not returning, unless on occasion of rain, till three in the afternoon. The young, when they have just burst the shell, are covered with a blackish

down. They crawl on the sand the first day; they soon begin to run, and then they conceal themselves so well in the tufts of grass that it is difficult to find them*.

The bill and feet of the Oyster-catcher are of a fine coral red: hence Belon has called it *hæmatopus* †, taking it for the *himantopus* of Pliny; but these two names ought not to be confounded, or applied to the same bird. The former signifies *red legs*, and might be referred to the Oyster-catcher; but it is not found in Pliny, though Dalechamp reads it so: and the latter, expressive of tall, frail, and slender legs, belongs not to the Oyster-catcher, but to the long-shank. A word of Pliny in this passage might have apprized Belon of his mistake; *præcipue ei pabulum muscæ* ‡: the *himantopus*, which feeds on flies, can never be the Oyster-catcher, which lives on shell-fish.

Willughby, in cautioning us not to confound this bird, under the name of *hæmantopus*, with the *himantopus* with long and delicate legs, seems to point out another mistake of Belon's; who, in his description of the Oyster-catcher, attributes to it this delicacy of feet, incompatible, it would seem, with its mode of life, which obliges it to clamber on the edges of rocks. Its feet and

* Note communicated by M. Baillon, of Montreuil-sur-mer.

† From *ἡμα*, blood, and *πυς*, the foot.

‡ i. e. flies are its chief food, *lib. x. 47.*

toes are covered with a rough and hard scale *. It is more than probable, therefore, that here, as in other cases, the confusion of names has begotten that of the objects: the term *himantopus* ought to be appropriated to the long-shank, and *hæmatopus* ought to be entirely expunged, as vague and undefined.

The outer and middle toes of the Oyster-catcher are connected as far as the first joint by a portion of a membrane, and all the three are surrounded with a membranous edge. Its eyelids are red, as well as its bill, and its iris is gold-yellow; above each eye there is a little white spot: the head, the neck, the shoulders, are black, and also the upper surface of the wings; but this black is deeper in the male than in the female: under the throat there is a white collar; all the under side of the body from the breast is white, and the half of the tail, whose tip is black: a white bar, formed by the great coverts, intersects the dun black of the wing; and these colours have probably suggested the name of *pie*, though it differs from that bird in every other respect, particularly in the length of its tail, which is only four inches, and covered three-fourths by the wing: the

* "The legs are strong and thick . . . and the feet remarkable
" by the hard and scaly skin which covers them. . . . Nature having
" not only given them a bill fashioned for opening oysters, but hav-
" ing also armed their legs and feet with scales against the sharp
" edges."—Catesby, vol. i. p. 85.

feet, together with the small naked part of the leg above the knee, are scarce two inches, though the bird is about sixteen inches long.

[A] Gmelin makes the Oyster-catcher a separate genus, containing only one species. It is a very shy bird, but common on most of the English coasts. If a person approaches its nest, it vents a shrill scream. These birds gather in large flocks during winter.

The SWIFT-RUNNER.

LE COURE-VITE. *Buff.**Charadrius Gallicus.* Gmel.*Cursorius Europæus.* Lath. Ind.*Pluvialis Morinellus Flavescens.* Gerin.*The Cream-coloured Plover.* Lath. Syn.

THE two birds represented in Nos 795 and 892 of our *Pl. Enl.* are of a new genus, which required a distinct name. They resemble the plover in the feet, which have only three toes, but differ in the shape of the bill, which is curved, whereas that of the plovers is straight and inflated near the end. The first was killed in France, where it had probably strayed, since no other has been seen. It ran with rapidity along the shore, and hence it derived its name. We have since received from the coast of Coromandel a bird entirely similar in form, and different only in its colours; so that it may be regarded as a variety, or at least a kindred species. Both of them have larger legs than the plovers; they are as large, but not so thick; their toes are very short, particularly the two lateral ones. The plumage of the first is gray, washed with rufous brown; on the eye

is

is a lighter streak, almost white, which stretches backwards, and below it a black streak rising from the outer angle of the eye: the top of the head is rufous; the quills of the wing are black, and each feather of the tail, except the two middle ones, has a black spot, with another white one near the point.

The second, which came from Coromandel, is rather smaller than the first; the fore side of the neck and breast of a fine chesnut-rufous, which loses itself in black on the belly; the quills of the wing are black; the upper surface gray; the lower belly white; the head enveloped with rufous nearly as in the first: in both the bill and feet are yellowish white.

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The TURN-STONE.

LE TOURNE-PIERRE. *Buff.*

Tringa-Interpres. Linn. and Gmel.

Arenaria. Briss.

Morinellus Marinus. Will. and Ray.

The Hebridal Sandpiper. Penn. and Lightfoot.

The Turn-stone, or Sea Dotterel. Edw. Lath. &c.

WE adopt the name *Turn-stone*, given by Catesby, because it indicates the singular habit which this bird has of turning over the stones at the water's-edge, to discover the worms and insects that lurk under these; whereas all the other shore-birds content themselves with searching in the sand or mud. "Being at sea," says Catesby, "forty leagues from Florida, in the latitude of 31 degrees, a bird flew on our ship, and was caught. It was very alert in turning the stones that lay beside it: in doing so, it used only its upper mandible, and was able to turn over very nimbly stones of three pounds weight*." This action implies singular force and dexterity in a bird which is hardly so large as the dusky sandpiper.

* Carolina, vol. i. p. 72.

It

It has a bill of a harder and more horny substance than the other little shore-birds, and it forms a small family amid that numerous tribe: the bill is thick at the root, and gradually tapers to a point: the upper-part is somewhat compressed, and appears to rise with a slight curve: it is black, and an inch long: the feet have no membranes, are pretty short, and of an orange-colour.

The plumage of the Turn-stone resembles that of the ringed plover, in the white and black which intersect it, but without tracing distinctly a collar, and in the mixture of rufous on the back. This similarity in its colours has probably misled Brown, Willughby, and Ray, who have given it the appellation *morinellus* (dotterel); though it is of a kind entirely distinct from the plovers, being furnished with a fourth toe and a differently shaped bill.

The species of the Turn-stone is common to both continents. It is known on the west coast of England, where these appear generally in small companies of three or four*. They are equally known on the coast of Norfolk†, and in some of the islands of Gothland‡; and we have reason to believe that it is the same bird which, on the shores of Picardy, is called the *bune*. We received one from the Cape of Good Hope,

* Willughby.

† *Id. Ibid.*

‡ *Heligbolmen and Clafen. Fauna Suecica, N° 154.*

which

which was of the same size, and, except some slight differences, of the same colour with that of Europe. Catesby saw these birds near the coasts of Florida * ; and we cannot divine why Brisson reckons the American Turn-stone different from the European. We received one also from Cayenne, which was only somewhat larger ; and Edwards mentions another sent from Hudson's Bay. Thus this species, though it contains few individuals, has, like many other aquatic birds, spread from north to south in both continents, following the sea-shore, which yields it subsistence.

The gray Turn-stone of Cayenne appears to be a variety of this species, and to which we should refer the two birds represented in the *Planches Enluminees*, under the appellations of *Coulon-chaud de Cayenne*, and *Coulon-chaud gris de Cayenne* ; for we can perceive no essential difference. We should even regard them as the females of the first species, of which the male would have stronger colours ; but we suspend our judgment, because Willughby assures us that he could discern no difference between the plumage of the male and female of the Turn-stones which he described.

* " Comparing this bird with the description which Mr. Willughby gives of the sea-lark (turn-stone), I found it was the same species." Catesby.

[A] Specific character of the Turn-stone. *Tringa-Interpres* : " Its feet are red, its body black, variegated with white and ferruginous ; its breast and belly white."

The WATER OUZEL*.

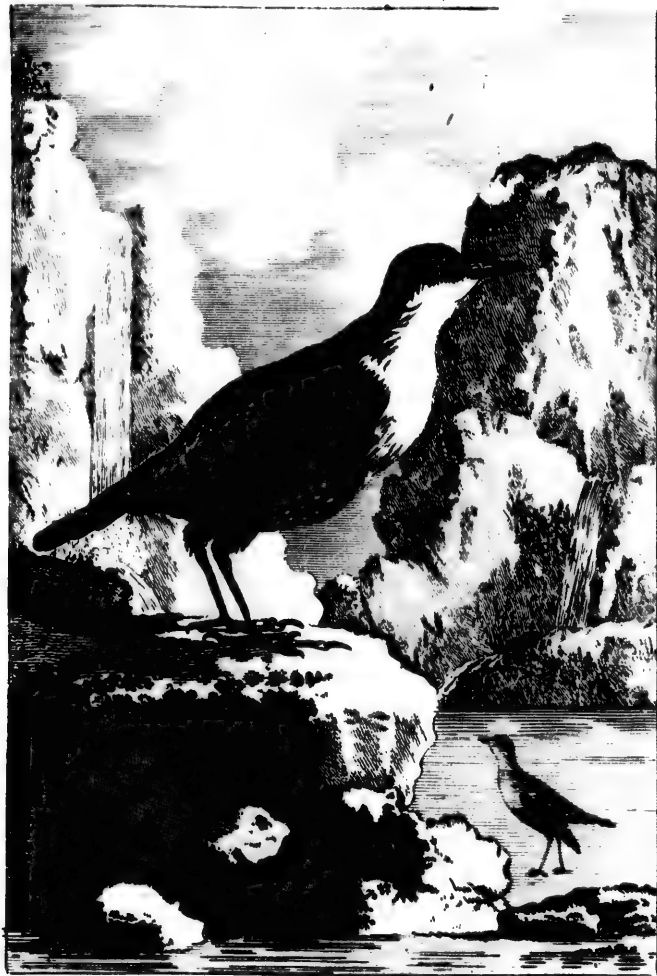
LE MERLE D'EAU. *Buff.**Sturnus Cinclus.* Linn. and Gmel.*Merula Aquatica.* Gefner, Ald. Johnst. Briff. &c.*Turdus Aquaticus.* Klein.*Motacilla-Cinclus.* Scop.*Turdus-Cinclus.* Lath.

THOUGH this bird has received the names of Ouzel, of Stare, of Thrush, or of Wag-tail, it is a water-fowl, which frequents the lakes and rills on lofty mountains. It resembles the blackbird in size, only somewhat shorter, and in the colour of its plumage, which is almost black; it has also a white space on the breast: but it is taciturn, it walks leisurely with measured steps, and runs beside the springs and brooks, which it never leaves †; preferring the limpid streams, whose fall is rapid, and whose bed is broken with stones and fragments of rocks. It is found near torrents and cascades,

* In Italian *Merla Aquaiola*: near Belinzone *Lerlichivolle*, and about lake Maggiore *Folun d'Aqua*, according to Gefner: in German *Bach-Amsel*, *Wasser Amsel*: in Swiss *Wasser Trostle*: in Swedish *Watn-Stare*.

† Schwenckfeld.

N^o 203



THE WATER OUZEL.

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and especially in the pebbly channels of clear rivulets*.

Its habits are very singular. Aquatic birds with palmated feet swim or dive; those which inhabit the shores, without wetting their body, wade with their tall legs; but the Water-Ouzel walks quite into the flood, following the declivity of the ground: it is observed to enter by degrees, till the water reaches its neck; and it still advances, holding its head not higher than usual, though completely immersed: it continues to walk under the water, and even descends to the bottom, where it saunters as on the dry bank. We are indebted to M. Hebert for the first account of this extraordinary habit, which I know not to belong to any other bird. I shall here give the observations which he was pleased to communicate to me.

“ I lay ambushed on the verge of the lake
“ Nantua, in a hut formed of pine-branches
“ and snow, where I patiently waited till a boat,
“ which was rowing on the lake, should drive
“ some wild-ducks to the water's edge. I ob-
“ served without being perceived: before me
“ was a small inlet, the bottom of which gently

* The Water-Ouzel has a very wide mouth; its feathers are greasy like the ducks, which enables it the easier to dive under water for aquatic insects: it forms its nest with moss near rivulets, and fashions it like a vault: its eggs are four in number. *Extract of a letter from Dr. Hermann to M. de Montbeillard, dated Strasburg, 22d September 1774.*

“ shelved,

“ shelved, and might be about two or three feet
“ deep in the middle. A Water-Ouzel stopped
“ here more than an hour, and I had full leisure
“ to view its manœuvres. It entered into the
“ water, disappeared, and again emerged on the
“ other side of the inlet, which it thus repeatedly forded. It traversed the whole of the bottom, and seemed not to have changed its element, and discovered no hesitation or reluctance in the immersion. However, I perceived several times, that as often as it waded deeper than the knee, it displayed its wings, and allowed them to hang to the ground. I remarked, too, that when I could discern it at the bottom of the water, it appeared enveloped with air, which gave it a brilliant surface; like some sorts of beetles, which are always in water, inclosed with a bubble of air. Its view in dropping its wings on entering the water, might be to confine this air; it was certainly never without some, and it seemed to quiver. These singular habits of the Water-Ouzel were unknown to all the sportsmen whom I have talked with; and, perhaps, without the accident of the snow-hut, I should have ever been ignorant of them: but I can aver, that the bird came to my very feet, and, that I might observe it, I did not kill it*.”

The history of birds presents few facts more curious than the foregoing. Linnæus had

* Note communicated by M. Hebert to M. le Comte de Buffon.

rightly

rightly said, that the Water-Ouzel descends into the streams, and again emerges with much dexterity *; and Willughby had remarked that, though cloven-footed, this bird dived: but neither of them seems to have known that it plunged in order to walk on the bottom. We may easily suppose, that for this purpose a pebbly channel and clear water are requisite, and that a slimy ground would be altogether improper. Accordingly, this bird is found only in mountainous countries, at sources of rivers, and in the torrents which pour down from the rocks; as in Westmorland and other hilly parts of England †: in France, among the mountains of Bugey and Vosges, and in Switzerland ‡. It sits on the stones through which the rills wind their course. It flies very swiftly straight forward, razing the surface of the water, like a kingfisher. When, on wing, it utters a feeble cry, especially in the season of spring: it then associates with its female, though at all other times it goes single ||. The female lays four or five eggs; conceals her nest with great care, and often places it near the paper-mills constructed on brooks.

The season in which Hebert saw the Water-Ouzel, proves that it is not a bird of passage.

* *Fauna Suecica.*

† Willughby.

‡ *Idem.*

|| *Idem.*

It remains all winter in our mountains, and dreads not the rigour of winter even in Sweden, where it seeks the cataracts and whirlpools, which are not affected by the frost*.

The nails of this bird are very strong and curved, and serve to clasp the pebbles, as it walks at the bottom of the water: the feet have the same conformation as those of the land ouzels: like them also, it has the hind toe and nail stronger than those placed before, and those toes are distinctly parted, and without any portion of membrane, as Willughby supposed. The leg is feathered to the knee; the bill is short and slender, both mandibles tapering equally, and arched slightly near the point.

The bill of this bird, the feet and the neck being short, we might conceive it requisite to walk under the water, to catch the small fish and aquatic insects on which it feeds. Its plumage, which is thick and clothed with down, seems impenetrable by water, which enables it to remain without inconvenience in that fluid; its eyes are large, of a fine brown; the eye-lids white, and they must be kept open under water, that the bird may distinguish its prey.

A fine white space covers the neck and breast; the head and the upper side of the neck, as far as the shoulders and the border of the white space, are rusty ash-colour, or chesnut; the

* *Fauna Suecica.*

back,

back, the belly, and the wings, which reach not beyond the tail, are of a blackish and slaty cinereous; the tail is very short, and has nothing remarkable.

[A] Specific character of the Water-Ouzel, *Turdus-Cinclus*:
" Its bill and feet are black; its straps white; its tail and rump
" gray and brown."

The WATER-THRUSH.

LA GRIVE D'EAU. *Buff.**Tringa Macularia.* Linn. and Gmel.*Turdus Aquaticus.* Briss.*The Spotted Tringa.* Edw.*The Spotted Sandpiper.* Penn. and Lath.

THIS bird has the speckled plumage and the size of the throffle: its feet resemble those of the preceding; its nails are large and hooked, particularly the hind one; but its bill is similar to that of the purre, of the dusky sandpiper, and of other small shore birds, and the lower part of its leg is naked: it is therefore wide of being a thrush. It appears to be a foreign species, little related to the European birds: yet Edwards presumes that it is common to both continents, as he received one from the county of Essex, where it had strayed, no other having ever been seen there.

The bill is eleven or twelve lines in length: it is flesh-coloured at the base, and brown near the point; the upper mandible is marked on each side by a furrow, which extends from the nostrils to the extremity of the bill; the upper surface of the body is sprinkled with blackish spots
on

on an olive-brown ground, as the under surface is speckled on a lighter and whitish ground; there is another white bar above each eye, and the quills of the wing are blackish; a small membrane joins the outer toe, near the root, to the middle one.

[A] Specific character of the Spotted Sandpiper, *Tringa Maculata*: "The base of its bill and its feet are carnation; its body "spotted all over; its eye-brows, and a double bar on its wings, "white."

The K N O T.

LE CANUT. *Buff.*

Tringa-Canutus. Linn. and Gmel.

IT is probable that in some of the northern countries there are traditionary anecdotes of this bird, since it retains the name of Canute, the Dane, king of England *. It would much resemble the gray lapwing, were it as large, and its bill otherwise shaped. This is pretty thick at the base, and tapers gradually to the extremity, which is not very pointed, yet not inflated like the bill of the lapwing: all the upper side of the body is cinereous and waved; the white tips of the great coverts trace a line on the wing; blackish crescents on the white-gray ground mark the feathers of the rump: all the under side of the body is white spotted with gray on the throat and breast; the lower part of the leg is naked; the tail does not exceed the closed wings. Willughby says, that he saw one of these birds in Lincolnshire, about the beginning of winter, and that they remain there two

* That monarch is said to have been remarkably fond of the flesh of this bird. *Willughby.*

or three months, in flocks by the sea-shore, and afterwards disappear: he adds, that he saw another near Liverpool. That which Edwards describes, was found in the London market, in the hard winter of 1740; which makes me think that they never advance to the south of Great Britain, but in the most severe seasons. They must, however, be more common in the northern parts of that island, since Willughby describes a method of fattening them, by feeding them with bread soaked in milk, and speaks of the exquisite flavour thus communicated to their flesh. He subjoins, that, at first sight, a person would not distinguish them from the sandpipers (*tringæ*), but by the white bar on the wing. The bill, he remarks, too, is of a harder substance than usual in other birds, in which its structure resembles that of the woodcock.

An indication given by Linnæus would shew, that this bird is found in Sweden; yet does a difficulty occur: for, according to Willughby, the feet of the *Knot* are cloven, but Linnæus represents his *Canutus* as having its outer toe connected by the first joint to that of the middle. If both these observers have been accurate, we must regard the two birds as belonging to distinct species.

[A] Specific character of the Knot, *Tringa-Canutus*: "Its bill is smooth, its feet ashy, its primary wing-quills serrated, its outermost tail-quill spotless white."

The R A I L S.

LE RALES. *Buff.*

THESSE birds constitute a large family, and their habits are different from those of the other shore-birds, which reside on sands and gravel. The Rails, on the contrary, inhabit only the slimy margins of pools and rivers, especially low grounds covered with flags and other large marsh plants. This mode of living is habitual and common to all the species of water rails. The land rail frequents meadows, and from the disagreeable cry, or rather rattling in the throat, of this bird, is derived the generic name *. In all the Rails, the body is slender, and shrunk at the sides; the tail extremely short; the head small; the bill pretty like that of the gallinaceous kind, though much longer, and not so thick; a portion of the leg above the knee is bare; the three fore toes without membranes, and very long: they do not, like other birds, draw their feet under their belly in flying, but allow them to hang down; their wings are small and very concave, and their flight is short.

* *Râler*, in French, signifies to rattle in one's throat.

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Land
THE ~~RAIL~~ RAIL.

The LAND RAIL.

LE RALE DE TERRE, ou GENET. *Buff.*

FIRST SPECIES.

Rallus-Crex. Linn. and Gmel.*Gallinula-Crex.* Lath. Ind.*Oryzometra.* Gefner, Aldrov. Will. Johnst. &c. **Crex.* Gefner, Aldrov. Charleton, &c.*Rallus Genistarum.* Briss.*Rallus Terrestris.* Klein.*The Land Hen.* Will.*The Daker Hen, or Rail.* Alb.*The Corn Creek.* Sibb. Scot.*The Corn Craker.* Martin's West. Isles.*The Crane Gallinule.* Lath. Syn.

IN wet meadows, from the time the grass is grown till it be cut down, there issues from the thickest part of the herbage a raucous voice, or rather a broken, harsh cry, *crëk, crëk, crëk*, much like the noise made by stripping forcibly the teeth of a large comb under the fingers: as we approach the sound retires, and is heard at a

* It is denominated in Greek, Italian, French and German, *the mother or king of the Quails*, Ορνυομετρα, *Re delle Quaglie*, *Roi des Cailles*, *Wachtel Koenig*: in German it is also named, from its cry, *Schryck*, *Schrye*: in Silesia *Snorcher*: in Poland *Chrościel*, *Derkacz*, *Kasper*: in Sweden *Korn Knarren*; and in the province of Upland *Aengsnaerpa*: in Norwegian *Akerrire*, *Ager-bone*. This bird lurks frequently in broom, and hence the name it sometimes has in French, *Genet*, and the appellation which Brisson gives it, *Rallus Genistarum*.

remove

remove of fifty paces. It is the Land Rail that emits this cry, which might be taken for the croaking of a reptile *. This bird seldom escapes by flight, but almost always walks nimbly through the thickest grafs, where it leaves a remarkable track. It begins to be heard about the 10th or 12th of May, at the same time with the quails, which it seems ever to accompany †. Hence, as the quails too inhabit meadows, and as the Land Rail is less common, and rather larger, it has been supposed to be their leader ‡, and therefore called the *king of the quails*. But it differs from these in the characters of its conformation, which are common to the other rails, and in general to the marsh birds §, as Aristotle has well observed ||. The chief resemblance which this rail bears to the quail consists in its plumage, which however is browner and more golden; fulvous predominates on the wings; blackish and rusty form the colours of the body; these are disposed on the flanks by transverse lines, and are all paler in the female, which is rather smaller also than the male.

A gratuitous extension of the imaginary analogy between the Land Rail and the quail has likewise impressed the notion of an equal fecun-

* Longolius, *apud Gesnerum*.

† They arrive and retire together, according to Longolius.

‡ Aristotle, *Hist. Animal.* lib. viii. 12.

§ Klein.

|| Lib. viii. 2.

dity. But, from repeated observations, we are assured, that it seldom lays eight or ten eggs, never eighteen or twenty, as supposed: indeed, were we to admit such multiplication, the species would be more numerous, considering how well the nest is concealed. This nest is negligently constructed with a little moss or dry grass, and placed usually in some small hollow in the turf: the eggs, larger than those of the quail, are sprinkled with broader reddish spots. The young crakes run as soon as they burst the shell, following their mother, but quit not the meadow till the scythe sweeps away their habitation. The late hatches are plundered by the hands of the mower. All the other broods then shelter themselves in the fields of buckwheat, among oats, and in waste grounds overspread with broom, where they are found often in summer: a few return again to the meadows about the end of that season.

We may know when a dog lights on the scent of the Land Rail, from his keen search, his number of false tracks, and the obstinacy with which the bird persists in keeping the ground, insomuch that it may be sometimes caught by the hand: it often stops short, and squats down; the dog pushing eagerly forward, overshoots the spot, and loses the trace; the Rail, it is said, profits by his blunder, and runs back on its path; nor does it spring till driven to the last extremity, and then it rises to a good height before
it

it stretches onwards. It flies heavily, and never to a great distance. It is usually seen to alight, but in vain should we search for it; before the fowler has reached the spot, the bird has tripped off more than an hundred paces. The fleetness of its feet compensates for the tardiness of its wings: all its little excursions, its windings, and its doublings in the fields and meadows, are performed by running. When about however to retire into other countries, it feels, like the quail, unusual vigour, which fits it for performing the distant journey *. It commences its flight during the night, and aided by a favourable wind it advances into the south of France, where it attempts the passage of the Mediterranean. Many perish, no doubt, in these migrations, and it is remarked that their numbers are fewer on their return.

The Land Rail is never seen in the south of France but in its passage: it does not breed in Provence †. Belon says, that it is rare in Candia, though pretty common in Greece and Italy: it is found therefore in that island only in its transits of spring and autumn. The migrations of this bird extend more to the north than to

* I asked the Tatars how this bird, not being able to fly, could retire in winter: they told me that the Tatars and the Assians knew well that it could not of itself pass into another country; but that when the cranes retire in autumn, each takes a rail upon its back, and conveys it to a warmer climate.

Gmelin, *Voyage en Siberie*, tom. ii. p. 115.

† *Memoirs communicated by the Marquis de Pisleue.*

the south; and, notwithstanding the slowness of its flight, it penetrates into Poland *, Sweden †, Denmark, and even Norway ‡. It is said to be rare in England §, and found only in some particular districts, though common in Ireland ||. Its motions seem to observe the same order in Asia as in Europe; and in Kamtschatka the month of May is likewise the term of their arrival ¶.

The Land Rail repairs to the northern countries as much for the sake of cool situations, as to obtain its proper food; since, though it eats seeds, especially those of broom, trefoil, gromwell, and fattens in the cage on millet and grain **, it prefers insects, slugs, worms; and these, which are necessary for its young, can be found only in shady wet grounds ††. But when grown up, every sort of aliment suits it: it becomes fat, and its flesh exquisite. It is caught, like the quail, by a net, into which it is decoyed by an imitation of its cry, *crĕk, crĕk, crĕk*, by

* Rzeczyſki.

† Linnæus.

‡ Müller; Brunnich.

§ Turner ſays, that he never ſaw or heard it anywhere but in Northumberland: yet Dr. Tancred Robinſon avers that it is found alſo in the northern part of Great Britain; and Sir Robert Sibbald reckons it among the birds of Scotland.

|| Willughby and Ray.

¶ In the Kamſchadale language, the month of May is called *Tava Kwateh*, which ſignifies the month of quails.

** Aldrovandus.

†† Willughby, Schwenckfeld, Linnæus.

rubbing

rubbing hard the blade of a knife on an indented bone *.

Most of the names given in different languages to this bird are evidently formed to imitate this singular cry †. Hence Turner, and some other naturalists, have supposed it to be *crex* of the ancients. But that term appears to have been applied by the ancients to other birds. Philus gives the *crex* the epithet of βραδυπτερος, or *sluggish-winged*, which would indeed suit the Land Rail. Aristophanes represents it as migrating from Libya: Aristotle says, that it is *quarrelsome*, which may have been attributed to it from the analogy to the quail; but he adds, that the *crex* seeks to destroy the nests of the black-bird ‡, which cannot apply to the rail, since it never inhabits the woods. Still less is the *crex* of Herodotus a rail, for he compares its size to that of the ibis, which is ten times larger §. The avoiet, too, and the teal, have sometimes the cry *crex, crex*: and the bird which Belon heard repeating that cry on the banks of the Nile, is, according to his account, a species of godwit. Thus the sound represented by the word *crex*, belonging to several species, is not sufficiently precise to distinguish the Land Rail.

* Longolius.

† Schryck, Schreck, Korn-Knarr, Corn-Crek, &c.

‡ Lib. ix. 1.

§ See the Article of the *Ibis*.

[A] Specific character of the Land Rail, *Rallus-Crex*: "Its wings are rufous ferruginous." This bird leaves our island in winter: on its first arrival it weighs only six ounces, but fattens so much during its stay as to weigh eight ounces before it retires. The Land Rails appear numerous in the isle of Anglesea, about the end of May, and are supposed to pass from thence into Ireland, where the humid face of the country is so congenial to their nature.

The WATER RAIL.

SECOND SPECIES.

Rallus Aquaticus. Linn. Gmel. Briss. &c.
*The Water Rail, Bilcock, or Brook Ouzel**. Will.

THE Water Rail runs beside stagnate water as swiftly as the land rail through the fields. It also lurks constantly among the tall herbs and rushes. It never comes out but to cross the water by swimming or running; for it often trips nimbly along the broad leaves of the water-lily which cover pools †. It makes small tracks over the tall grass; and as it always keeps the same paths, it may be easily caught by nooses set in them ‡. Formerly, the sparrow-hawk or falcon § was flown at it; and in that sport the greatest difficulty was to set up the

* In German *Schwartz Wasser Heunle* (black water-hen) *Aesch-beunlin* (cinereous fowl). Gesner gives it the name *Samet-bunle*, or velvet hen, on account of its soft plumage. At Venice it is called *Forzane* or *Porzana*, which appellation is also bestowed on the water hens. In Denmark it is denominated *Vagtel-Konge*: in Norway *Band-rire*, *Strand-snarre*, *Vand-kone*, *Vand-vagtel*: and in the Feroe islands *Jord-keene*.

† Klein.

‡ Belon.

§ Belon and Gesner.

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THE WATER RAIL.

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bird, for it stuck to its concealment with the obstinacy of the land rail. It causes the same trouble to the sportsman, raises the same impatience in the dog, which it misleads and distracts, and protracts as long as possible its springing. It is nearly as large as the land rail, but its bill is longer, and reddish at the point; its feet are of a dull red: Ray says, that in some species these are yellow, and that this difference may proceed from the sex. The belly and sides are striped across with whitish bars on a blackish ground: the colours are disposed the same as in all the rails: the throat, the breast, the stomach, are of a fine slate-gray: the upper surface is of an olive brown rufous.

Water Rails are seen near the perennial fountains during the greatest part of the winter: yet, like the land rails, they have their regular migrations. They pass Malta in the spring and autumn *. The Viscount de Querhoënt saw some fifty leagues off the coasts of Portugal on the 17th of April; they were so fatigued that they suffered themselves to be caught by the hand †. Gmelin found these birds in the countries watered by the Don. Belon calls them

* Note communicated by M. Desmazy.

† "I tried," says M. de Querhoënt, "to raise some: they thrived wonderfully at first, but after a fortnight's confinement their long legs grew paralytic, and the birds could only crawl on their knees; at last they expired." Gesner says, that having long fed one, he found it to be peevish and quarrelsome.

black rails, and says they are *every where known*, and that the species is more numerous than the *red rail* or land rail.

The flesh of the Water Rail is not so delicate as that of the land rail, and has even a marshy taste, nearly like that of the gallinule.

[A] Specific character of the Water Rail: " Its wings are gray, spotted with brown; its flanks spotted with white; its bill "fulvous below." It continues the whole year in England.

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The MAROQUETTE.

THIRD SPECIES.

Rallus-Forzana. Linn. and Gmel.

Gallinula-Forzana. Lath. Ind.

Gallinula Ochra. Gesner.

Porcellana, Forzana, Grugnetto. Aldr.

Rallus Aquaticus Minor, five Marouetta. Briss.

The Spotted Water-hen. Penn.

The Spotted Gallinule. Lath. Syn.*

THIS is a small water rail, not exceeding a lark in size. All the ground of its plumage is olive-brown, spotted and clouded with whitish, whose lustre gives this dark shade an enamelled gloss; whence it has been called the *pearled rail*. Frisch denominates it improperly the *spotted water-hen*. It appears at the same season with the great water rail: it haunts marshy pools: it lurks and breeds among the reeds: its nest is fashioned after the manner of a gondola, and composed of rushes interwoven and fastened at the ends to the stalk of a reed; so that, like a small boat or cradle, it rises and

* In Picardy it is called *Girardine*, and in the Milanese *Girardina*: in some parts of France *Cocouan*, according to Brinon: in the Bolognese *Forzana*: and in Alsace *Winkernell*, according to Gesner.

sinks with the water. It lays seven or eight eggs; and the floating young are hatched all black. Their education is speedy; for they run, swim, dive, and soon separate, each to lead a solitary, savage life, which prevails even in the season of love: since, except during actual coition, the male discards his female, pays no tender attentions or caresses, indulges in no frolics or joyous airs, and feels none of those soft delights, the sweet preludes of fruition. Unhappy beings, who never breathe a sigh to the objects of their passion! insipid loves, whose sole end is to procure posterity!

Its habits wild, its instinct stupid, the *Marouette* is unsusceptible of education, nor is even capable of being tamed. We raised one, however, which lived a whole summer on crumbs of bread and hemp-seed: when by itself, it kept constantly in a large bowl of water; but if a person entered the closet where it was shut, it ran to conceal itself in a small dark corner, without venting cries or murmurs. In the state of liberty, however, it has a sharp piercing voice, much like the scream of a young bird of prey: and though it has no propensity to society, as soon as one cries, another repeats the sound, which is thus conveyed through all the rest in the district.

The *Marouette*, like all the rails, is so obstinately averse to rise, that the sportsman often seizes it with his hand, or fells it with a stick.

If

If it finds a bush in its retreat, it climbs upon it, and from the top of its asylum beholds the dogs brushing along in fault: this habit is common to it and to the water rail. It dives, swims, and even swims under water, when hard pushed.

These birds disappear in the depth of winter, but return early in the spring; and even in the month of February they are common in some provinces of France and Italy. Their flesh is delicate and much esteemed; those in particular which are caught in the rice-fields in Piemont are very fat, and of an exquisite flavour.

[A] Specific character of the *Rallus-Porzana*: "Its two middle tail-quills are edged with white; its bill and feet somewhat olive."

FOREIGN BIRDS of the ANCIENT CONTINENT,

WHICH ARE RELATED TO THE RAIL.

The TIKLIN, or PHILIPPINE RAIL.

FIRST SPECIES.

Rallus Philippensis. Linn. Gmel. and Briss.

THERE are four different species known by the name of *Tiklin* in the Philippine islands. The present is remarkable for the neatness and agreeable contrast of its colours: a gray space covers the fore side of the neck; another space of chestnut rufous covers the upper side of it and the head; a white line extends above the eye; all the under side of the body is enamelled as it were with little cross lines, alternately black and white in festoons; the upper surface is brown, clouded with rusty, and sprinkled with small white drops on the shoulders and the edge of the wings, of which the quills are intermixed with black, white, and chestnut. This bird is rather larger than the water rail.

[A] Specific character of the *Rallus Philippensis*: "It is brown, "below striped with gray; its eye-brows white; its neck tawny "below."

The BROWN TIKLIN.

SECOND SPECIES.

Rallus Fuscus. Linn. Gmel. and Briss.
The Brown Rail. Lath.

THE plumage of the bird is of an uniform dull brown, only washed on the throat and breast with a purple vinous tint, and broken under the tail by a little black and white on the lower coverts. It is as small as the preceding.

[A] Specific character of the *Rallus Fuscus*: "It is brown, its vent waved with white, its feet bright yellow."



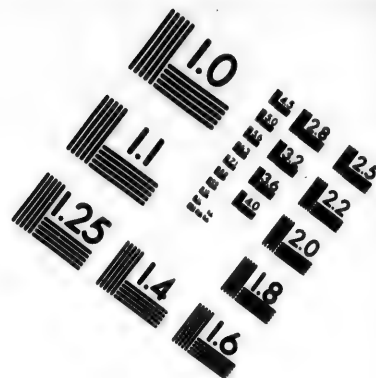
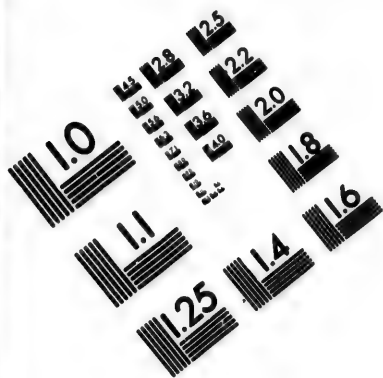
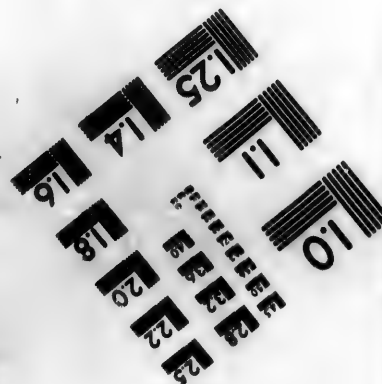
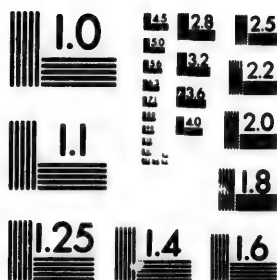


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The STRIPED TIKLIN.

THIRD SPECIES.

Rallus Striatus. Linn. and Gmel.

Rallus Philippensis Striatus. Briss.

THIS is of the same size with the preceding. The ground of its plumage is fulvous brown, crossed, and, as it were, worked with white lines; the upper part of the head and neck is chesnut-brown: the stomach, the breast, and the neck are olive-gray; and the throat is rusty white.

[A] Specific character of the *Rallus Striatus*: "It is blackish
" waved with white, its throat tawny."

The COLLARED TIKLIN.

FOURTH SPECIES.

Rallus Torquatus. Linn. and Gmel.

Rallus Philippensis Torquatus. Briss.

The Banded Rail. Lath.

THIS is rather larger than the land rail. Its upper surface is brown, tinged with dull olive; its cheeks and throat are foot-colour; a white track rises from the corner of the bill, passes under the eye, and extends behind; the fore side of the neck, the breast, the belly, are blackish-brown, striped with white lines; a band of fine chesnut of the breadth of the finger, forms a half collar above the breast.

[A] Specific character of the *Rallus Torquatus*: "It is brown, "below waved with white, a white line below its eyes."

FOREIGN BIRDS of the NEW CONTINENT,

WHICH ARE RELATED TO THE RAIL.

The LONG-BILLED RAIL.

FIRST SPECIES.

Rallus Longirostris. Gmel.

THE species of the rails are more diversified, and perhaps more numerous, in the deluged and swampy grounds of the new, than in the dryer countries of the ancient continent. It appears that two of these are smaller than the rest, and that the present is, on the contrary, larger than any of the European. Its bill also is longer, even than in proportion; its plumage is gray, or a little rusty on the fore side of the body, and mixed with blackish or brown on the back and the wings; the belly is striped with white and black cross bars, as in most of the other rails. Two species, or at least two varieties of these birds, are found in Cayenne; and they differ widely in size, some being as large as a godwit, and others scarcely equal to the common water rail.

The K I O L O.

SECOND SPECIES.

Rallus Cayanaensis. Gmel.*The Cayenne Rail.* Lath.

THIS is the name by which the natives of Cayenne express the cry or puling of this Rail. It is heard in the evening at the same hour with the *tinamous*, that is, at six o'clock, the instant the sun sets in the equatorial climates. Their cry is the signal to assemble; for in the day-time they lurk dispersed and solitary in the wet bushes. They make their nest in the little low branches, and it consists of a single sort of reddish herb; it is raised into a small vault to prevent the rain from penetrating. This Rail is rather smaller than the *marouette*; the fore side of its body and the crown of its head are of a fine rufous, and the upper surface is washed with olive-green on a brown ground. We conceive that Edwards's Penfylvanian rail is the same with this *.

* *Rallus Virginianus.* Linn. and Gmel.*Rallus Aquaticus*, var. 1. Lath.*Rallus Penfylvanicus.* Briff.*The American Water-Rail.* Edw.*The Virginian Rail.* Penn.

“ Above it is brown, below tawny-brown; its tail-quills brown;
 “ its eye-brows and its throat white.” *Latham.*

The SPOTTED RAIL of CAYENNE.

THIRD SPECIES.

Rallus Variegatus. Gmel.

The Variegated Rail. Lath.

THIS handsome Rail, which is one of the largest, has brown-rufous wings; the rest of the plumage spotted, streaked and edged with white, on a jet ground. It is found, too, in Guiana.

The VIRGINIAN RAIL.

FOURTH SPECIES.

Rallus Carolinus. Linn. and Gmel.

Gallinula Carolina. Lath. Ind.

Rallus Terrestris Americanus. Klein.

Rallus Virginianus. Briss.

The Little American Water-Hen. Edw.

The American Rail, or Soree. Catesby.

The Soree Gallinule. Lath. Syn.

THIS bird, which is of the bulk of the quail, is more a-kin to the land-rail than to the water-hens. It appears to be found through the whole extent of North America, as far as Hudson's Bay, though Catesby says, that he saw it only in Virginia: its plumage, he tells us, is entirely brown. He adds, that these birds grow fat in autumn, that the savages take them by speed of foot, and that they are as much prized in Virginia, as the rice-birds in Carolina, or the ortolans in Europe.

[A] Specific character of the *Rallus Carolinus*: "It is brown, its bridle black, its breast lead-coloured, its bill bright yellow, its feet greenish."

The JAMAICA RAIL.

LE RALE BIDI-BIDI. *Buff.*

FIFTH SPECIES.

Rallus Jamaicensis. Gmel. and Briss.

The least Water-hen. Edw. and Brown.

BIDI-BIDI is the cry of this Jamaican Rail: it scarcely surpasses a petty-chaps. Its head is entirely black; the upper side of the neck, the back, the belly, the tail, and the wings, are brown, variegated with whitish cross rays on the back, the rump, and the belly; the feathers of the wing and those of the tail are sprinkled with white drops; the fore side of the neck and the stomach are blueish cinereous.

THE LITTLE CAYENNE RAIL.

SIXTH SPECIES.

Rallus Minutus. Gmel.

The Little Rail. Lath.

THIS pretty little bird exceeds not the petty-chaps: the fore side of the neck and breast are white, lightly tinged with fulvous and yellowish; the flanks and the tail are striped transversely with white and black; the ground of the feathers on the upper surface is black, variegated on the back with white spots and lines, and fringed with rusty colour. It is the least of the genus.

THE Rails seem to be still more diffused than varied: and nature has produced or transported them over the most distant lands. Captain Cook found them at the Straits of Magellan; in different islands of the southern hemisphere, at Anamoka, at Tanna, and at the isle of Norfolk. In the Society Islands there are two species of Rails; a little black spotted one, (*pooa-née*) and
a little

a little red-eyed one (*mai-bo*). It appears that the two *accolins* of Fernandez, which he denominates *water-quails* *, are of a species of Rails peculiar to the great lake of Mexico. The *colins*, which might be confounded with these, are a kind of partridges.

* *Hist. Avi. Nov. Hisp.* cap. x. p. 16. "Acolin or water-quail. As large as a stare . . . the under side of its body bright white, its sides spotted with fulvous; its upper side fulvous, divided by blackish spots and bright white lines, encompassing four quills."

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The CAURALE.

Ardea-Helias *. Gmel. and Pallas.

Scolopax-Helias. Lath. Ind.

The Caurale Snipe. Lath. Syn.

IF we attended only to the shape of the bill and feet, we should reckon this bird a rail ; but its tail is much longer, and we have therefore adopted a compound name, expressive of this character, *Caurâle* or *Queue Râle* (tail-rail). Its plumage is rich, though the colours are dark : to form an idea of it, we may compare it to the wings of those fine shining flies, in which black, brown, rufous, fulvous, and light gray, intermingled in zones and zig-zags, compose a soft enchanting mixture. Such particularly is the plumage of the wings and tail ; the head is hooded with black, and there are long white lines above and below the eye ; the bill is exactly that of the rail, except that it is rather longer ; and the head, the neck, and the body are also longer than in the rail ; the tail is five inches, and projects two beyond the wings ; the foot is thick, twenty-six lines high, and the

* In Cayenne it is called *petit Paon des roses* (little peacock of the roses.)

naked part of the leg ten : the rudiment of a membrane is broader and more apparent than in the rail. The total length, from the point of the bill, which is twenty-seven lines, to that of the tail, is fifteen inches.

This bird has not hitherto been described, and was but lately discovered. It is found, though rarely, in the interior parts of Guiana, where it inhabits the sides of rivers : it lives solitary, and makes a slow plaintive whistle, which is imitated to decoy it.

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THE COMMON GALLINULE.

The WATER HEN.

LA POULE D'EAU. *Buff.*

Fulica-Chloropus. Linn. and Gmel.

Gallinula Chloropus Major. Aldrov. Johnst. Sibb. &c.

Gallinula-Chloropus. Lath. Ind.

Gallinula. Briss.

The Common Water Hen, or Moor Hen. Will. Penn. &c.

The Common Gallinule. Lath. Syn. *

NATURE passes by gradations from the shape of the rail to that of the Water Hen, whose body is also compressed at the sides, its bill of a similar form but shorter, and in this respect liker that of the gallinaceous tribe: its head too is bare, and covered with a thick membrane; a character of which vestiges may be found in certain species of rails †. It flies likewise with its feet hanging down: its toes are extended in the same manner as those of the rails, but are furnished their whole length with a membranous edging; and this is the intermediate shade between the birds with cloven feet and those with webbed feet.

The habits of the Water Hen correspond to

* In German *Robtblaschen*: in Polish *Kokoska*.

† Willughby.

its conformation: it is oftener in the water than the rail, though it does not swim much, but only crosses from one side to another. It lurks the greatest part of the day among the reeds, or under the roots of alders, willows, and ozers, and leaves not its retreat until evening: it frequents less the marshes and bogs than the rivers and pools. Its nest is placed close to the brink of the water, and constructed with a large heap of broken reeds and rushes interwoven. The mother quits her nest every evening, having previously covered the eggs with herbs and rushes. The young run as soon as they are hatched, like those of the rail, and in the same way are led by their dam to the water: and, no doubt, it is for this reason that the parents, consulting future convenience, always build their nest so near the surface. So well is the little family conducted and concealed, that it is difficult to rob it during the very short term of its education*: for the young ones are soon able to shift for themselves, and leave their prolific mother sufficient time to rear a second brood. It is even averred that they often have three hatches a year†.

The Water Hens quit the cold hilly parts in

* "The Water Hens conceal their young so well, that I have never seen them, though I have fowled much in marshes at all seasons." *Note of M. Hebert.*

† Willughby.

October *, and spend the whole winter in our temperate provinces, where they are found near fountains and uncongealed fresh waters †. Thus it can scarcely be reckoned a bird of passage, since it remains the whole year in several countries, and only flits between the mountains and the plains.

But though the Water Hen is not migratory, and is every where scarce, it has been planted by nature in most of the known regions, even the remotest. Captain Cook found it in the isle of Norfolk ‡, and in New Zealand §: Adanson, in an inlet at Senegal: Gmelin, in the plain of Mangasea in Siberia, near the Jenisea, where the species is very numerous. Nor are these birds less common in the Antilles, at Guadeloupe ||, at Jamaica ¶, and in the isle of *Aves*, though it contains no fresh water: many are

* Observations made in the Lorraine Vosges, by M. Lottinger.

† Observations made in Brie, by M. Hebert.

‡ Second Voyage, vol. ii.

§ "The water or wood hens, though numerous enough here, are so scarce in other parts, that I never saw but one. The reason may be, that, as they cannot fly, they inhabit the skirts of the woods, and feed on the sea-beach; and are so very tame or foolish as to stand and stare at us till we knocked them down with a stick. The natives may have, in a manner, wholly destroyed them. They are a sort of rail, about the size and a good deal like a common dunghill hen; most of them are of a dirty or dark brown colour, and eat very well in a pyc or fricassée."—Cook's *second Voyage*, vol. i. p. 97.

|| Dutertre, tom. ii. p. 277.

¶ Sloane, Browne.

found also in Canada *. And in Europe they inhabit England, Scotland †, Prussia ‡, Switzerland, Germany, and most of the provinces of France. It is true that we are not certain whether all those mentioned by travellers are of the same species with ours. Le Page du Pratz expressly says, that the Water Hen of Louisiana is the same with that of France §; and it appears that the one described by Father Feuillée at the island St. Thomas is nothing different ||. We may discriminate, however, three species or varieties of Water Hens, which never, we are assured, contract affinity with each other, though they haunt the same pools. Those found in Europe are distinguished by their size, and the middle ones are the most common: they are about the bulk of a pullet six months old; the length from the bill to the tail is a foot, and from the bill to the nails fourteen or fifteen inches; the bill is yellow at the point, and red at the base; the membranous space on the front is also red, and so is the lower part of the thigh above the knee; the feet are greenish; all the plumage is of a dull iron gray, clouded with white under the body, and greenish brown gray above; a white line borders the wing; the tail,

* Hist. Gen. des Voy. tom. xv. p. 227.

† Rzaczynski.

‡ Gesner.

§ Histoire de la Louisiane, tom. ii. p. 117.

|| Journal d'Observations (edit. 1725.) p. 393.

when

when raised, shows white on the lateral feathers of the inferior coverts;—the plumage is thick, compact, and clothed with down. In the female, which is rather smaller, the colours are lighter, the white waves on the belly are more distinct, and the throat is white: the space on the forehead is, in young subjects, covered with a down more like hair than feathers. A young Water Hen, which we opened, had in its stomach portions of small fish and aquatic plants mixed with gravel: the gizzard was very thick and muscular, like that of the domestic hen: the bone of the *sternum* appeared to us much smaller than usual in birds; and if this difference was not owing to the age, it would partly confirm the assertion of Belon, that the *sternum* and *ischium* are of a different shape in the Water Hen from the same bones in other birds.

[A] Specific character of the Water Hen, *Fulica Choloropus*:
“ Its front is fulvous, its bracelets * red, its body blackish.” Linnaeus says, that it has two hatches annually, and lays seven eggs about two inches long, of an ochry white colour, with a few scarlet spots.

* i. e., the coloured rings above the knees.

THE LITTLE WATER-HEN.

LA POULETTE D'EAU. *Buff.*

Fulica Fusca. Linn. and Gmel.

Gallinula Fusca. Lath. Ind.

Gallinula Minor. Briss.

The Brown Gallinule. Lath. Syn.

THOUGH Belon has applied to this bird the diminutive *poulette*, it is not much smaller than the preceding. Its colours are nearly the same; only that naturalist remarks, that it has a blueish tint on the breast, and that its eye-lid is white; he adds, that its flesh is very tender, and that its bones are thin and brittle. We had one of these birds which lived only from the 22d of November to the 10th of December: water indeed was its only support: it was shut in a narrow corner, and taken out every day by two panes which opened in the door; at earliest dawn it repeatedly darted at these glasses: during the rest of its time it concealed itself as much as possible, holding down its head: if taken in the hand, it pecked with its bill, but feebly. In this rigorous confinement it was never heard to utter a single cry. These birds are in general very taciturn; they are even said to be dumb, but when at liberty, they have a slender call—*bri, bri, bri.*

[A] Specific character of the Brown Gallinule, *Fulica Fusca*:
 "Its front is yellowish, its bracelets of the same colour, its body
 "duskyish."

The PORZANA, or the GREAT WATER-HEN.

Fulica Fusca, var. Gmel.

Gallinula Major. Briss.

Rallus Italarum. Johnst. Ray. Will. &c.

THIS bird is very common in Italy, in the neighbourhood of Bologna, where the fowlers call it *Porzana*. Its length from the bill to the tail is near a foot and a half; the upper side of the bill is yellowish, and the point blackish; the neck and head are also blackish; the upper surface is chesnut-brown; the rest of the plumage is the same with that of the common water hen, with which we are assured it is sometimes found in our pools: the colours of the female are paler than those of the male.

The GRINETTA.

Fulica Nævia. Gmel.

Gallinula Fulica. Lath. Ind.

Porphyrio Nævius. Briss.

Poliopus. Aldrov. Gesner, and Ray.

The Small Water Hen. Albin.

The Grinetta Gallinule. Lath. Syn.

ACCORDING to Willughby, this bird is smaller than the rail, and its bill is very short. If we may judge from its different names, it must be well known in the Milanese *. It is found also in Germany, according to Gesner: that naturalist says nothing more than that its feet are gray, its bill partly red, partly black, the upper surface rufous brown, and the under side of the body white.

* At Milan, says Aldrovandus, it is called *Grugnetta*; at Mantua *Porzana*; at Bologna *Porcellana*; and elsewhere *Guardella Columba*: at Florence it is denominated *Tordo Gelfemino*, according to Willughby.

The S M I R R I N G.

Fulica Flavipes. Gmel.*Gallinula Flavipes.* Lath. Ind.*Porphyrio Rufus.* Briss.*Gallinula Ocbropus Major.* Ray and Will.*The Yellow-legged Gallinule.* Lath. Syn.

THE name *Smirring*, which Gesner supposes to have been given in imitation of the call, is in Germany the appellation of a bird which appears akin to the water hens. Rzacyński, mentioning it as a native of Poland, says, that it haunts the rivers, and nestles among the bushes which grow on their banks: he adds, that the swiftness with which it runs made him sometimes term it *trochilus*. In another place, he describes it like Gesner: "The ground of its plumage is rufous; the small feathers of the wing are brick-colour; the great quills of the wing are black; spots of the same are sprinkled on the neck, the back, the wings, and the tail; the feet and the base of the bill are yellowish."

The G L O U T.

Fulica Fiftulans. Gmel.

Gallinula Fiftulans. Lath. Ind.

Porphyrio Fufcus. Briff.

The Piping Gallinule. Lath. Syn.

THIS is a water hen, according to Gefner. He fays that it has a shrill high voice like the tone of a fife: it is brown, with a little white on the point of the wings: it is white round the eyes, at the neck, on the breast and the belly; its feet are greenish, and its bill is black.

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FOREIGN BIRDS,

WHICH ARE RELATED TO THE WATER-HEN.

The GREAT WATER-HEN of CAYENNE.

Fulica Cayensis. Gmel.

The Cayenne Gallinule. Lath.

THIS bird approaches the heron by the length of its neck, and removes from the water-hen by the length of its bill. It is the largest of the genus, being eighteen inches long: the neck and the head, the tail, the lower belly, and the thighs, are brown gray; the upper surface is dull olive; the stomach and the quills of the wings are rufous inclined to reddish. It is very common in the swamps of Guiana, and is seen even in the ditches of the town of Cayenne: it lives on small fish and aquatic insects: when young its plumage is entirely gray, which becomes reddish after moulting.

The MITTEK.

THE accounts of Greenland mention this bird as a water hen, but it may be some species of diver or grebe. In the male, the back and neck are white; the belly black, and the head verging on violet. In the female, the plumage is yellow, mixed and edged with black, so as to appear gray at a distance. These birds are very numerous in Greenland, especially in winter: they are seen flying in the morning from the bays to the islets, where they subsist on shell-fish; and in the evening they return to their retreats, where they pass the night. They follow the windings of the coast in their flight, and the sinuosities of the straits between the islets. They seldom fly over land, unless the force of the wind, particularly when it blows from the north, confines their excursions. The sportsmen seize this opportunity to fire at them from some promontory; those that are killed are picked up by a canoe, for such as are wounded go to the bottom, and never more appear*.

* Histoire Generale des Voyages, tom. xix. p. 44.

The KINGALIK.

THIS is also a native of Greenland, and said to be a water-hen. It is larger than the duck, and remarkable for the indented protuberance which grows on the bill between the nostrils, and which is of an orange yellow. The male is entirely black, except that its wings are white, and its back mottled with white: the female is brown.

THESE are all the foreign species which we can refer to the water-hens; for those termed *clucking hens* by Dampier are, according to his own account, akin to the herons*. Also the beautiful water-hen of Buenos-Ayres, described by Father Feuillée, is really of a different kind, since *its feet are like a duck's*.

* "The clucking hens resemble much the crab-eaters, but their legs are not quite so long; they keep constantly in the wet marshy places, though their foot is formed like that of land birds: they usually cluck like a hen with her chickens, for which reason the English call them *clucking hens*. There are many of them in the bay of Campeachy, and in other parts of the West Indies... The crab-eaters, the clucking hens, and the goldens, with regard to figure and colour, resemble our English herons, but are smaller." *Dampier's Voyage round the World*.

Lastly, the *Barbary water-hen*, with spotted wings, of Dr. Shaw, *which is less than a plover*, appears to us more related to the rails, than to the water-hens *.

* *Rallus Barbaricus.* Gmel.
The Barbary Rail. Lath.

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THE CHESTNUT JACANA.

The J A C A N A.

FIRST SPECIES:

Parra-Jacana. Linn, and Gmel.*Jacana Armata Fusca.* Briss.*Anser Chilensts.* Charleton.*The Spur-winged Water-Hen.* Edw.*The Chestnut Jacana.* Lath.

“THE Jacana of the Brazilians,” says Marcgrave, “must be ranged with the water-hens, which it resembles in its instincts, in its habits, in the round shape of its body, in the form of its bill, and in the smallness of its head.” Yet it appears to us to differ essentially from these birds by singular and even peculiar characters: it has spurs on the shoulders, and shreds of membranes on the fore side of the head; its toes and nails are extremely long; the hind-toe is as long as the fore-toe; all the nails are straight, round, and drawn out like needles; and from this circumstance probably it received at St. Domingo the appellation of *Surgeon*. The species is common in all the marshes of Brazil; and we are assured that it occurs also in Guiana and St. Domingo. We may presume that it is likewise found in all the

tropical parts of America, both on the continent and in the islands, as far as New Spain; though Fernandez seems to speak of it only from report, since he makes it come from the north, whereas it is really a native of the south.

We know four or five Jacanas, which are of the same bulk, and differ only in colour. The first species given by Fernandez is the fourth of Marcgrave. The head, the neck, and the fore-side of the body of this bird, are black tinged with violet; the great quills of the wing are greenish; the rest of the upper surface is fine chestnut, with a purplish or ferruginous cast: each wing is armed with a pointed spur inserted in the shoulder, exactly like the spines of the crisped ray-fish; a membrane, taking its origin at the root of the bill, spreads on the front, and divides into three portions, leaving also a barbel on each side; the bill is straight, inflated somewhat at the point, and of a fine yellow jonquil, like the spurs; the tail is very short, and this character, as well as the form of the bill, the tail, the toes, and the height of the legs, of which the half is covered with feathers, belongs equally to all the species of Jacanas. Marcgrave seems to exaggerate, when he compares their bulk to that of a pigeon; for their body is not larger than the quail, only their legs are much taller; their neck is also longer, and their head smaller:

smaller: they are always very lean; yet it is said their flesh is palatable.

The first species of Jacana is pretty common at St. Domingo, whence it was sent us by M. Lefebure Deshayes, under the appellation of *Chevalier mordoré armé* *.

" These birds," he says, " go commonly in pairs, and when separated by some accident they call each other: they are very wild, and the sportsman cannot approach them but by wiles, covering himself with leaves, or running behind the bushes or the reeds. They are seen regularly in St. Domingo during the rainy months of May and November, or shortly after: yet a few are seen at other times, which would shew that the places of their habitual abode are not very remote. But they are never found except in marshes, or at the sides of pools and brooks.

" The flight of these birds is not lofty, but pretty rapid: in rising they vent a shrill, squeaking cry, which is heard far, and seems to bear some resemblance to that of the white owl. The poultry are alarmed, taking it for the scream of a bird of prey, though the Jacana is very remote from that tribe. Nature we might suppose has armed it for war, yet we know not any foe which it combats."

This analogy to the armed lapwings, which are quarrelsome and noisy birds, and have a

* i. e. The armed ferruginous horseman.

similar form of bill, seems to have induced some naturalists to class them together *. But they differ in the shape of their body and of their head, and in so far resemble the water-hen, from which, however, they are distinguished by the peculiar conformation of their feet. The Jacanas may therefore be reckoned a separate genus, appropriated to the new continent. Their abode, and their structure, sufficiently shew that they live and feed after the manner of the other shore-birds. And though Fernandez says that they frequent only the salt basons near sea-mark, it appears from the above quotation that they occur in the interior parts of the country, on the verge of fresh waters.

* Adanson. See the Supplement of the Encyclopedie, article *Aguapica*.

[A] Specific character of the Chestnut Jacana, *Parva-Jacana*:
"Its hind nails very long, and its feet greenish."

The BLACK JACANA.

SECOND SPECIES.

Parva Nigra. Gmel.*Jacana Armata Nigra.* Briss.

ALL the head, the neck, the back, and the tail, are black; the top of the wings and their points are brown, the rest is green, and the under side of the body is brown; the spurs of the wing are yellow, and so is the bill, from the root of which a reddish membrane rises over the front. Marcgrave gives this species for a native of Brazil.

The GREEN JACANA.

THIRD SPECIES.

Parra Viridis. Gmel.

Jacana. Pison. Johnst. and Briss.

MARCGRAVE extols the beauty of this bird, which he reckons the first species of its genus: its back, its wings, and its tail, are tinged with green on a black ground, and the neck glistens like that of a pigeon: the head is invested with a membrane of Turkey blue: the bill and the nails are vermilion in their first half, and yellow at the point. The analogy leads us to suppose that this species is armed as well as the rest, though Marcgrave does not express it.

N A.

The JACANA-PECA.

FOURTH SPECIES.

Parra Brasiliensis. Gmel.*Jacana Armata.* Briss.*Aguapecaca.* Marcg. Johnst. Ray, Will. &c.*The Brazilian Jacana.* Lath.

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THE Brazilians call this bird *Agua-pecaca*: we term it *Jacana-Peca*, to suggest both its genus and its species. It differs little from the preceding: "Its colours," says Marcgrave, "are more dilute, and its wings browner; each wing is armed with a spur, which serves as a weapon of defence; but its head is not covered with membrane." The name *Porphyrio*, which Barrere has given to this bird, seems intended to denote its red feet. The same author says that it is common in Guiana, where the Indians call it *Kapoua*; and we apprehend that the following note of M. De la Borde refers to it. "The little species of water-hen, or *surgeon*, with armed wings, is very common in Guiana, where it inhabits the pools of fresh water and the meres: it is usually seen in pairs, though sometimes twenty or thirty flock together. There are always some in

" summer in the ditches round the town of
" Cayenne; and in the rainy season they appear
" even in the open parts of the new town:
" they lurk among the rushes, and live on fish
" and water insects." It would seem that in
Guiana, as well as in Brazil, there are several
species or varieties of these birds, which are
known under different names. Aublet informs
us, that the surgeon-bird is pretty common in
Guiana, in the meres, the basons, and the
plashes of the savannas; that it sits on the
broad leaves of the water-lily; and that the
natives give it the appellation of *kinkin*, expres-
sive of its shrill note.

The V A R I E G A T E D J A C A N A.

F I F T H S P E C I E S.

Parra Variabilis. Gmel.

Rallus digitis triuncialibus. Klein.

Fulica Spinosa. Linn.

Jacana Armata Varia. Briss.

The Variable Jacana. Lath.

THIS Jacana has the same predominant colours with the others, but more varied: it is greenish, black, and purple chesnut: on each side of the head there is a white bar, which passes above the eyes: the fore side of the neck is white, and also the whole of the under side of the body: the front is covered with an orange-red membrane, and it has spurs on the wing. This bird was sent to us from Brazil: Edwards represents one brought from Carthage; which confirms our remark, that the Jacanas are common to different parts of America, situated between the tropics.

The SULTANA HEN, or PORPHYRION.*

Fulica-Porphyrus. Linn. and Gmel.

Gallinula-Porphyrus. Lath. Ind.

Porphyrio. Gesner. Aldrov. Johnst. Will. &c.

The Purple Water-ben. Edw. and Alb.

The Purple Gallinule. Lath. Syn.

THE moderns have given the name of *Sultana Hen* to a bird famous among the ancients, under the name of *Porphyrio*. We have frequently had occasion to remark the justness of the denominations bestowed by the Greeks, which generally allude to the distinctive characters, and are therefore superior to the terms hastily adopted in our languages from superficial or inaccurate views. The present is an instance. As this bird seemed to bear some resemblance to the gallinaceous tribe, it got the name of *ben*; but as, at the same time, it differed widely, and excelled by its beauty and port, it received the epithet of *Sultana*. But the term *Porphyrio*, indicating the red or purple tint of its bill and feet, was more just and characteristic: and should we not rebuild the fine ruins

* In Greek *Πορφύριον*, on account of its purple bill and feet. The Romans adopted this name.



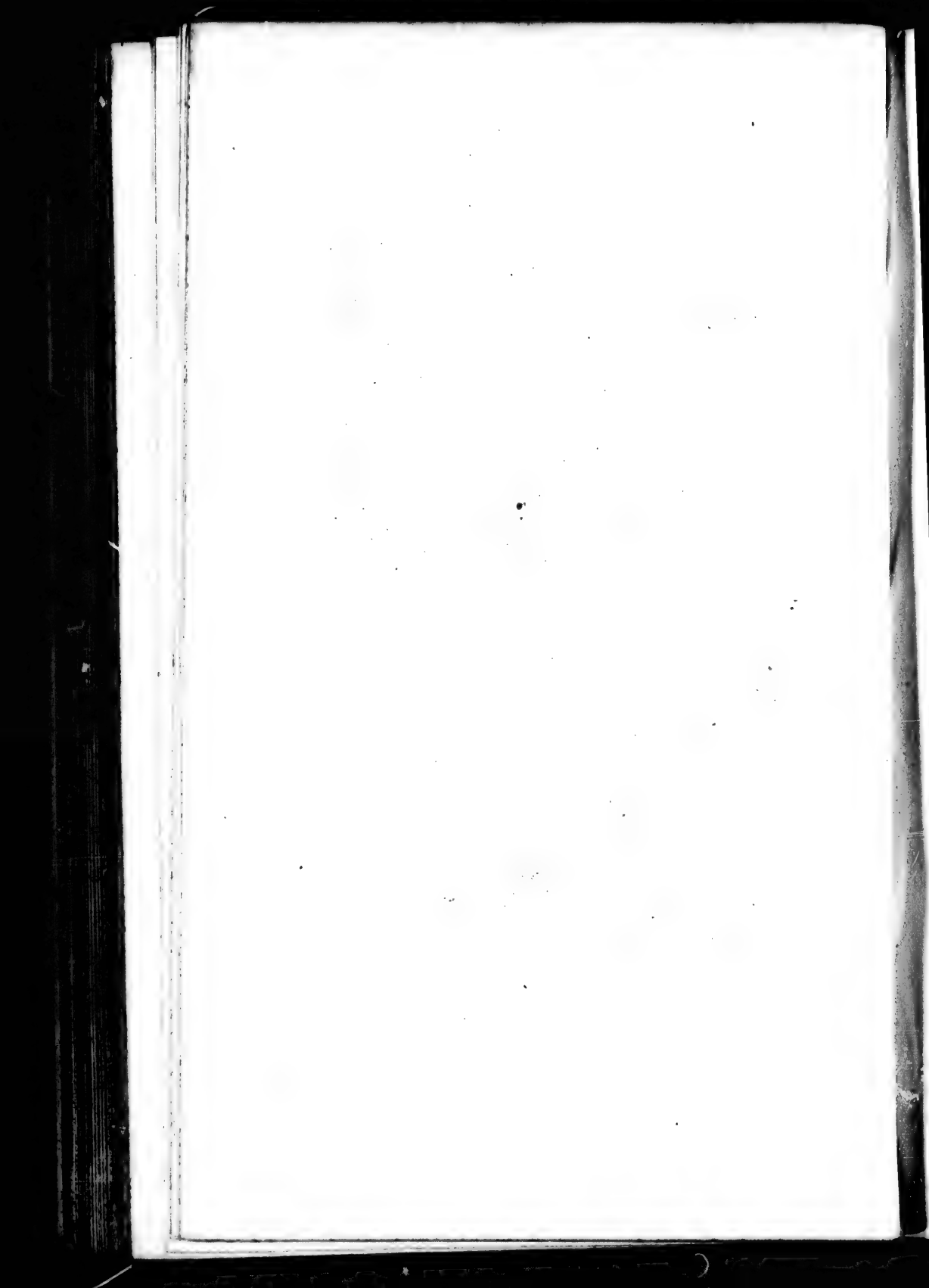
THE PURPLE GALLINULE.

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of learned antiquity, and restore to nature those brilliant images and those faithful portraits from the delicate pencil of the Greeks, ever awake to her beauties and her animation?

Let us therefore give the history of the Porphyryion, before we speak of the Sultana Hen. Aristotle, in Athenæus *, describes the Porphyryion to be a bird with long legs and pinnated feet, the plumage blue, the bill purple, and firmly fixed to the front, and its bulk equal to that of a domestic cock. According to the reading of Athenæus, Aristotle subjoined that it had five toes; which would have been erroneous, though some other ancient authors have alledged it. But among the moderns, Isidorus has fallen into a much greater error, which has been copied by Albertus, who says that one of its feet is webbed and calculated for swimming, and that the other is fitted for running like the land birds; which is equally false and absurd, and must mean nothing more than that the Porphyryion is a shore bird, and lives on the confines of the land and water. It appears, indeed, to be amphibious; for, in the domestic state, it eats fruits, flesh, and fish: its stomach has the same structure with that of those birds which live equally on animal and on vegetable food †.

* *Deipnos.* 9.

† *Memoires de l'Academie des Sciences, depuis 1666 jusqu'en 1669, tom. iii. partie 3.*

It is therefore easily reared: it charms by its noble port, its fine shapes, its brilliant plumage, enriched with intermingled tints of purple and beryl: its disposition is mild and peaceable: it consorts with its domestic companions, though of different species, and selects some favourite among them *.

It is also a pulverulent bird, like the cock: yet it employs its feet, like a hand, to carry food to its bill †. This habit seems to result from its proportions, the neck being short, and the legs very tall; so that it is fatiguing to stoop to the ground.—The ancients had made most of these remarks on the Porphyryion, and it is one of the birds which they have described the best.

Both the Greeks and Romans, notwithstanding their voracious luxury, abstained from eating the Porphyryion. They brought it from Lybia ‡, from Comagene, and from the Balearic islands §, to be fed ||, and to be placed in their palaces and temples, where it was left at liberty as a guest ¶,

* See in Ælian the story of a Porphyryion which died of grief, after having lost the cock its companion.

† Pliny, *lib.* x. 46.

‡ Alexander the Myndian, in Athenæus, reckons the Porphyryion in the number of Lybian birds, and relates that it was sacred to the gods in that country. According to Diodorus Siculus, Porphyryions were brought from the heart of Syria, with other kinds of birds distinguished by their rich colours.

§ Pliny, *lib.* x. 46 and 49.

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¶ Ælian, *lib.* iii. 41.

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whose noble aspect, whose gentle disposition, and whose elegant plumage, merited such honours.

Now if we compare this Porphyryion of the ancients with our Sultana Hen, figured in N° 810, *Planches Enluménées*, it appears that this bird, which was brought to us from Madagascar under the name of *taleve* *, is exactly the same. The academicians, who have described a similar one, recognized also the Porphyryion in the Sultana Hen. It is about two feet long from the bill to the claws: the toes are extremely long, and completely parted, without the least vestige of membrane: they are disposed as usual, three before and one behind; and Gesner was mistaken when he represented them as placed two and two: the neck is very short in proportion to the length of the legs, which are featherless: the feet are very long; the tail is very short; the bill is shaped like a flat cone at the sides, and is pretty short: the last property which characterises this bird is, that its front is bald, like that of the coot's, and covered with a plate, which, extending to the top of the head, spreads into an oval, and seems to be formed by the production of the horny substance of the bill. This is

* The *taleve* is a river bird of the bulk of a hen, which has many violet feathers; and its front, its bill, and its feet red. Flacourt speaks of it with admiration. *Hist. Gen. des Voyages*, t. viii. p. 606.—The French navigators call this bird *blue hen*. "The blue hens of Madagascar have bred on the isle of France." *Remarks made in 1773, by the Viscount de Querboënt*.

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what Aristotle expresses in Athenæus, by saying that the Porphyryon has its bill strongly attached to its head. The academicians found two pretty large *cæca*, which expanded into sacs; and the inflation of the lower part of the *œsophagus* seems to supply the place of a craw, which, Pliny says, is wanting in this bird.

This Sultana Hen, described by the Academicians, is the first bird of the kind that has been seen by the moderns. Gesner speaks only from report, and from a drawing of it: Willughby says, that no naturalist has seen the Porphyryon. We owe to the Marquis de Nesle the pleasure of having seen it alive; and we express our most respectful thanks for what we regard as a debt of Natural History, which every day is enriched by his enlightened and generous taste: he has put it in our power to verify in a great measure, on his Sultana Hen, what the ancients have said of their Porphyryon. This bird is very gentle and innocent, and at the same time timorous, fugitive, fond of solitude and retirement, concealing itself as much as possible when it eats. It cries from fear when one approaches, at first with a faint sound, which afterwards grows shriller and louder, and ends with two or three dull and hollow claps: while in a cheerful mood, it vents softer and calmer accents. It seems to prefer fruits and roots, particularly those of the succorics, to every other sort of food, though it can also live on seeds. If
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offered a fish, it eagerly seizes it, and devours it greedily. Often it repeatedly soaks its provisions in water. How small soever its morsel may be, it constantly clenches it with its long toes, bending the hind one over the rest, and holding its foot half raised; it then eats by crumbs.

Scarce any bird has more beautiful colours; the blue of its plumage is soft and glossy, embellished with brilliant reflections; its long feet, and the plate from the top of its head to the root of its bill, are of a fine red, and a tuft of white feathers under the tail heightens the lustre of its charming garb. Except that it is rather smaller, the female differs not from the male, which exceeds the partridge, but is inferior to a common hen. The Marquis de Nessel brought this pair from Sicily, where, according to the note which he obligingly communicated to us, they are known under the name of *Gallafagiani*: they are found on the lake Lentini, above Catana, and are sold for a moderate price in that city, as well as in Syracuse and the adjacent towns. They appear alive in the public places, and plant themselves beside the sellers of vegetables and fruits to pick up the refuse: and this beautiful bird, which the Romans lodged in their temples, now experiences the decline of Italy. That fact shows that the Sultana Hens have been naturalized in Sicily from a few pairs of these Porphyryons introduced from Africa;

Africa ; and in all probability this fine species has been propagated, in like manner, in some other countries ; for we see from a passage of Gefner, that this naturalist was convinced that these birds are found in Spain, and even in the south of France.

This bird is one of those which are by nature most disposed to domestication, and to multiply them would be both agreeable and useful. The pair kept in the voleries of the Marquis de Nesle, nested last spring (1778) ; both male and female laboured in constructing the nest ; they placed it at some height from the ground, on a projection of the wall, with a heap of sticks and straws : the eggs were six in number, white, with a rough shell, exactly round, and about the size of a demi-billiard. The female was not assiduous in covering ; and a common hen was substituted, but without success. We may surely expect another hatch to be more prosperous if carefully attended by the mother herself ; for this purpose these birds ought to enjoy the calm and retreat which they seek, and especially in the season of love.

[A] Specific character of the purple Gallinule, *Fulica Porphyrio* :
“ Its front is red, many bracelets ; its body green, below violet.”

B I R D S,

WHICH ARE RELATED TO THE SULTANA
HEN.

SINCE the primary stock of the Sultana Hen inhabits the southern regions of our continent, it is not probable that the climates of the north produce the secondary species. We must therefore reject the fourth, fifth, sixth, seventh, and eighth species of Brisson, which he presumes to have the frontal plate, though Gesner, from whom he borrowed the descriptions, gives no indication of this plate, either in his text or by his figures. The second of these appears to be a rail, and accordingly we have ranged it in that genus: the four others are water hens, as the original author himself says. With regard to the ninth species of Brisson, which he calls the *Sultana Hen of Hudson's Bay*, it ought to be excluded, both on account of the climate, and because Edwards gives it as a coot, remarking at the same time that it is more akin to the rail. Notwithstanding these retrenchments, there still remain three species in the ancient continent, which seem to form the intermediate

194 GREEN SULTANA HEN.

shade between the Sultana Hen *, the coots, and the water hens. There are also three species in America, which appear the representatives, in the new world, of the Sultana Hen and its subordinate species.

* Mr. Forster found at Middleburg, one of the Society Isles, coots with a blue plumage, which seem to be Sultana Hens.

The GREEN SULTANA HEN.

FIRST SPECIES.

Fulica Viridis. Gmel.

Gallinula Viridis. Lath. Ind.

Porphyrio Viridis. Briss.

The Green Gallinule. Lath. Syn.

THIS bird is much smaller than the Sultana, and exceeds not a rail. All the upper side of the body is dull green, but glossy; and all the under side of the body white, from the cheeks and the throat to the tail: the bill and frontal plate are yellowish-green. It is found in the East Indies.

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The BROWN SULTANA HEN.

SECOND SPECIES.

Rallus Phœnicurus, var. 1. Gmel.

Gallinula Phœnicura, var. 1. Lath.

THIS bird comes from China: it is fifteen or sixteen inches long. It has none of the rich tints that seem peculiar to this genus of birds, and perhaps the specimen is a female. All the upper side of the body is brown or blackish cinereous; the belly is rufous; the fore side of the body, of the neck, and of the throat, and the circle about the eyes, are white; the frontal plate is small, and the bill varies somewhat from the conical shape which obtains in the true Sultana; it is longer, and resembles more the bill of the water hens.

The A N G O L I.

THIRD SPECIES.

Fulica Maderaspatana. Gmel.

Porphyrio Maderaspatanus. Briss.

Gallinula Maderaspatana. Lath. Ind.

Crex Indica. Ray.

The Madras Rail-ben. Id.

The Madras Gallinule. Lath. Syn.

THIS bird is commonly at Madras called *Caunangoli*, which we have shortened into *Angoli*; the Gentoos term it *Boallu-cory*. It is

difficult to determine whether it ought to be referred to the sultanas, the water hens, or even the rails: all that we know of it is a short hint given by Petiver in his addition to Ray's Synopsis; but this indication, like all the others of that fragment, is formed from drawings sent from Madras, and expresses not the discriminating characters. Brisson makes it his tenth species of Sultana Hen, and by consequence presumes that it has the frontal plate, though Petiver never mentions it: on the contrary, he says, that its bill is slender, sharp, and longish; he applies the names of *crake* and *rail*, and he represents it as equal in bulk to a goose. So far it resembles more the sultana: and this is all that we can say, till we are better informed.

The LITTLE SULTANA HEN.

FOURTH SPECIES.

Fulica Martinica. Linn. and Gmel.

Porphyrio Minor. Briss.

Gallinula Martinica. Lath. Ind.

The Martinico Gallinule. Lath. Syn.

THE genus of the Sultana Hen occurs, as we have said, in the new world; and if the species are not exactly the same, they are at least

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least analogous. The present is a native of Guiana : it is only somewhat larger than the water-rail. It resembles our Sultana Hen so closely, that in the whole history of birds there are few examples of analogies so intimate between those of the two continents. Its back is blueish green ; and all the fore side of the body is soft violet-blue, which covers also the neck and head, assuming a deeper cast. It appears to us to be the same with what Brisson makes his second species.

The FAVOURITE,

FIFTH SPECIES.

Fulica Flavirostris. Gmel.

Gallinula Flavirostris. Lath. Ind.

The Favourite Gallinula. Lath. Syn.

A HEN.

THIS is nearly of the same size with the preceding, and comes from the same country. Perhaps it is only the female of the same species, especially as the colours are the same, only more dilute ; the blueish green of the wings, and the sides of the neck, are faint ; brown shines through on the back and on the tail : all the fore side of the body is white.

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The ACINTLI.

SIXTH SPECIES.

Falica Purpurea. Gmel.*Gallinula Purpurea.* Lath. Ind.*Quachilton.* Fernand. Nieremb. Johnst. &c.*The Crowing Gallinule.* Lath. Syn.

THIS Mexican bird, which Brisson refers to our sultana hen, or porphyryon of the ancients, differs by several characters: besides that we can hardly suppose that a bird of such laborious flight could pass from the one continent into the other; the toes and feet of the Acintli are not red, but yellow or greenish; all its plumage is blackish purple, intermingled with some white feathers. Fernandez gives it the names of *quachilton* and *yacacintli*; the latter of which we have adopted, and shortened. The denomination of *avis filiquastrini capitis* is very expressive, and shows that the flat frontal plate is like a large pod, a character which connects this bird with the coots and sultana hens. Fernandez adds, that the Acintli crows like a cock during the night and at the break of day; which might afford a suspicion that it belongs not to the genus of the sultana hen, whose voice bears no resemblance to that of the cock.

A bird of a species nearly allied to this, if not the same, is described by Father Feuillée, under the name of *water hen* *: it has the character of the sultana, the broad flat escutcheon on the front; all its attire is blue, except a cowl of black on the head and neck. Feuillée remarks also differences of colours between the male and female, which occur not in our sultana hens, in which the female is smaller than the male, but both perfectly alike in colours.

Nature has therefore produced at great distances the species of sultana hens, but always in the southern latitudes. Forster found it in the South Sea; and the *purple water hen* which he saw at Anamooka appears to be a bird of the same family.

* " The female has its crown deep fulvous; its mantle of the same colour; its facings white; its wings greenish, mixed with a little fulvous; the quills sky-blue, mixed with a little green: these birds are very lean, and have a disagreeable marshy taste." *Feuillée.*

[A] Specific character of the Crowing Gallinule, *Fulica Purpurea*: " It is purple, its bill pale, its feet greenish-yellow."

The COMMON COOT.

LA FOULQUE. *Buff.*

Fulica Atra. Linn. and Gmel.

* *Fulica.* All the Naturalists.

THE species of the Coot commences the extensive tribe of true aquatic birds. Though its feet are not completely webbed, it lives habitually on the water, and seems even more attached to that element than any fowl, except the diver. It is seldom seen on land, and is there so bewildered and defenceless, that it frequently suffers itself to be caught with the hand. It spends the whole day on the pools, which it prefers to the rivers; and, except in walking from one pool to another, it never sets foot on

* The Greek name is conjectured, from a passage in Aristotle, *Lib.* ix. 35, to be *Φαλαγξ*; the modern Greeks call it *Λεφα*: in Latin *Fulica* or *Fulix*, because of its dusky colour; *fuligo*, smoke: hence the Italian *Follega* or *Follata*: on Lago Maggiore *Pullon*: in Catalonia *Folge*, *Follaga*, *Gallinosa de Aigua* (water hen): in Germany *Wasser-houn*, *Robr-beunle* (reed hen), *Tautcherlein* (diver): in Suabia *Blesz*, *Blessing*: in Lower Saxony *Zapp*: in Switzerland *Belch*, *Bellique*, *Belchisen*: in Holland *Meer-Coot*: in Sweden *Blaos-Klaeka*: in Denmark *Blis-bone*, *Blas-and*, *Vard-bone*: in Poland *Lyfka*, *Dzika*, or *Kacza*: in many provinces of France *Sudelle*; and in Picardy *Blerie*.

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THE COMMON COOT.

shore: and if the interval be considerable, it has recourse to its wings, and rises very high; but commonly it flies only in the night *.

The Coots, like many other water fowl, see best in the dusk, and the older ones never seek their food but in the night †. They lurk among the rushes the greatest part of the day; and when disturbed in their retreat, they will bury themselves in the mud rather than spring. They seem to make an effort in commencing the motion so natural to other birds; and whether on water or on land they rise with difficulty. The young Coots, less solitary or circumspect, are seen at all hours of the day bouncing with small leaps out of the water, one fronting another. They suffer the fowler to approach, yet eye him steadily; and they plunge so nimbly, the instant they perceive the flash, that often they elude the shot. But in autumn, when these birds leave the small pools and assemble on the lakes, vast quantities are caught ‡. For this purpose, a number of skiffs are arranged in a line extending the breadth of the lake; this little fleet is rowed

* "I never saw it fly during the day but to avoid the fowler; but I have heard it pass over my head at all hours of the night."
Observation of M. Hebert.

† According to Salerne, the Coot, when other food fails (and this can seldom happen) dives, and tears up from the bottom of the water the root of a great rush, which it gives its young to suck.

‡ Particularly in Lorraine, on the great pools of Tiaucourt and of Indre.

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forward, and drives the Coots into some inlet: the birds, then, urged by fear and necessity, rise at once into the air, and, endeavouring to regain the open water, they pass over the heads of the fowlers, and receive a general and destructive fire. The same plan of operation is now conducted at the other end of the lake, where those which escaped have alighted; and what is singular, neither the clamours of the sportsmen, the report of the muskets, the spectacle of the range of boats, nor the death of their companions, can induce these birds to betake to distant flight. They do not quit this scene of carnage till the night following; and a few linger behind next morning.

These indolent birds have deservedly many foes: the moor buzzard sucks their eggs, and plunders their young; and to this destruction must be imputed the fewness of their number, considering that they are very prolific. The Coot lays eighteen or twenty eggs, which are of a dirty white, and almost as large as a hen's; and if the first hatch be destroyed, the mother has often a second, of ten or twelve eggs*. She builds in deluged spots covered with dry reeds: she selects a tuft, on which she raises a structure above the level of the water, and lines the cavity with little dry herbs and tops of reeds, forming a large shapeless nest, distinguishable at

* Observation of M. Baillon.

a distance *. She sits twenty-two or twenty-three days, and as soon as the young are hatched they jump out of the nest, and never return again. The mother cherishes them under her wings, and they sleep round her beneath the reeds: she leads them to the water, in which they swim and dive well, from the moment of their birth. They are covered at first with a smoky black down, and look very ugly; only the trace is to be seen of a white plate destined to ornament their front. It is then that the bird of prey assails them so cruelly, and often devours the dam and her brood †. The old Coots, which have repeatedly lost their callow offspring, grow cautious from misfortune, and conceal their nests among the flags on the margin of the pools; and keep together their young among these thick coverts. These alone perpetuate the species; for so great is the depopulation of the rest, that a good observer, who has particularly studied the œconomy of the Coots ‡, reckons that not above one-tenth escape the talons of the birds of prey, particularly those of the moor buzzard.

* There is little probability that the Coot, as Salerne alledges, makes two nests, one for hatching, and another for lodging her young. What may have given rise to this notion is, that the brood, after they have once quitted the nest, never return to it, but squat with their mother among the rushes.

† The same Salerne pretends, that the Coot defends itself against the bird of prey, by presenting its talons, which are, indeed, pretty sharp: but this feeble resistance must generally be of little avail.

‡ M. Baillon.

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The Coots breed early in the spring, and eggs are found in their body as soon as the end of winter *. They reside on our pools the greatest part of the year, and in some places they are permanent settlers †. Yet in autumn they all leave the small pools, and resort to the large ones, where they assemble in a great flock; there they often remain till December; and when the snows, and especially the frosts, drive them from the high and chill tracts, they descend into the plains, which enjoy a milder temperature; and the want of water, rather than the cold, constrains them to shift their haunts. M. Hebert saw them in a very severe winter on the lake of Nantua, which is late in freezing: he saw them also in the plains of Brie, though in small numbers, in the depth of winter. But, most probably, the bulk of the species remove by degrees to the adjacent countries, which are warmer: for, as their flight is laborious and tardy, they cannot journey to any great distance; and indeed they appear again as early as February.

The Coots are spread through the whole of Europe, from Italy to Sweden: they are found, too, in Asia ‡. They occur in Greenland, if Egede rightly translates two words in the lan-

* Belon.

† As in Lower Picardy, according to the observations of M. Baillon.

‡ Lettres Edifiantes, *thirtieth collection*, p. 317.

guage of the natives, by the great and little Coot *. In fact, the species consists of two families, which live in the same lake without ever cohabiting, and are distinguished from each other solely by their bulk, and not by the colour of the frontal plate, as some pretend; for in both that is usually white, and becomes red only in the season of love.

This thick naked membrane, which covers the fore side of the head like an escutcheon, and which made the ancients give the Coot the epithet of *bald*, seems to be a production of the upper layer of the substance of the bill, which is soft, and almost fleshy near the root. The bill is fashioned into a flat cone at the sides, and is bluish white; when in the season of courtship, the frontal plate assumes its vermilion tint.

All the plumage is furnished with a thick down, covered with delicate close feathers; it is of a leaden-black, full and deep on the head and neck, with a white streak on the fold of the wing: no difference indicates the sex. The Coot is as large as a domestic hen, and its head and body are nearly of the same form: its toes are half-webbed, fringed fully on both sides with a membrane, scalloped into festoons, whose knots correspond to the joints of the *phalanges*: these membranes are, like the feet, of a leaden colour: above the knee a small portion of the naked leg is circled with red: the thighs are

* *Navia* and *Navicularia*.

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thick and fleshy. These birds have a gizzard, two large *cæca*, and a capacious gall-bladder *. They live chiefly, as well as the water-hens, on aquatic insects, small fish, and leeches; yet they also gather seeds, and swallow pebbles: their flesh is black, lean, and has a slight marshy taste.

In the state of liberty, the Coot has two different cries, the one broken, the other drawling: it is the latter, no doubt, from which Aratus draws a prognostic †; for the former is represented by Pliny as boding storms ‡. But captivity seems to dispirit and oppress it so much, that it loses its voice, and would seem absolutely mute.

* Belon.

† *Haud modicos tremulo fundens à gutture cantus.* Apud Cicer. lib. i. *De Nat. Deor.*

‡ *Et fulicæ matutino clangore tempestatem.* lib. xviii. 35.

[A] Specific character of the Common Coot, *Fulica Atræ*: "Its front is flesh-coloured, its bracelets yellow, its body blackish." The Coots remain the whole year in Great Britain. They are found also in North America: on the rivers in Carolina they are called *flusterers*. The savages, near the falls of the Niagara, dress their skins for pouches.

The GREATER COOT.

LA MACROULE, ou GRANDE FOULQUE.

Buff.

Fulica Aterrima. Linn. and Gmel.*Fulica Major.* Will. Ray, and Briss.

ALL that we have said of the common Coot (*morelle*) applies to the Greater Coot (*macroule*); their habits and their shapes are the same, only the latter is rather larger than the former, and the bald space on the front is also broader. One of these birds, taken in March 1779, near Montbard, among the vines, whither it had been driven by a violent wind, afforded me an opportunity, for the space of a month, during which it was kept alive, of making the following observations. It refused, at first, all sorts of dressed food, bread, cheese, and flesh, raw or boiled: it rejected also earth-worms and young frogs, whether dead or alive. It required to be crammed with gobbets of soaked bread. It was extremely fond of a tray full of water, and would repose whole hours in it. It sought also to hide itself; though it was not wild, and suffered itself to be laid hold of, only pecking, with a few strokes, the hand that was about to seize it, and these

these so feeble, either because of the softness of the bill, or the weakness of the muscles, as hardly to make any impression on the skin: it betrayed neither anger nor impatience; it made no endeavour to escape, and shewed no surprize or fear. But this stupid tranquillity, this total want of vigour and courage, proceeded probably from its bewildered condition, remote from its proper element and its usual habits. It seemed deaf and mute; any noise made close to its ear never moved it, or drew the least inclination of its head; and though it was often pursued and teased, it never vented the smallest cry. We have the water-hen equally mute in captivity. The misery of slavery is greater than is supposed, since it sometimes bereaves its unhappy victims of even the power of complaining.

[A] Specific character of the Greater Coot, *Fulica Aterrima*:
" Its front is white, its bracelets red, its body blackish."

The CRESTED COOT.

LA GRANDE FOULQUE 'A CRÊTE. *Buff.**Fulica Cristata.* Gmel.

IN this Coot, the fleshy plate on the front is raised and detached in two shreds, which form a real comb. It is besides considerably larger than the preceding species, which it exactly resembles in its shape and plumage. It was sent to us from Madagascar. May it not be really the same with the European, only expanded by the influence of a hotter and more active climate?

Fulica Atterima:
"blackish."

The PHALAROPES.

EDWARDS was the first who introduced this genus of small birds, which, with the bulk and almost the shape of the sandpiper, have feet like those of the coot. From this analogy, Brisson terms them *Phalaropes**; while Edwards, resting on their more obvious appearance, is contented with the name *Tringa*. They are, indeed, little snipes or sandpipers, on which

* From *Φαλαγξ*, which is probably the Greek for the coot; and *πους*, the foot.

nature has bestowed the feet of the coot. They seem to belong to the northern countries: those figured by Edwards came from Hudson's Bay, and we received some from Siberia. But whether they migrate or stray, they are sometimes seen in England; for Edwards mentions one which was killed in winter in Yorkshire. He describes four different birds, which may be reduced to three species.

The CINEREOUS PHALAROPE.

FIRST SPECIES.

Tringa Hyperborea, maf. Linn. and Gmel.

Phalaropus Cinereus.

Tringa Fusca. Gmel.

Phalaropus Fuscus. Lath. Ind.

Phalaropus. Briss.

The Coot-footed Tringa. Edw.

The Brown Phalarope. Penn. and Lath.

IT is eight inches long from the bill to the tail, which projects not beyond the wings: its bill is slender, flattened horizontally, thirteen inches long, slightly swelled and bent near the point; its feet are deep fringed, like those of the coot, with a membrane in festoons, whose knots correspond also to the articulations of the toes:

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RED PHALAROPE.

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the upper surface of the head, neck, and body, is gray, waved gently on the back with brown and blackish: it has a white neck-piece, inclosed by an orange rufous line; below it, the neck is encircled with gray, and all the under side of the body is white. Willughby says, that he was informed by Dr. Johnson, that this bird has the shrill clamorous voice of the sea-swallows: but he did wrong to range it with these swallows, especially as he remarked its analogy to the coot.

The RED PHALAROPE.

SECOND SPECIES.

Tringa Fulicaria. Linn. and Gmel.

Phalaropus Hyperboreus, fem. Lath. Ind.

Phalaropus Rufescens. Briss.

The Red Coot-footed Tringa. Edw.

THE fore side of the neck, the breast, and the belly, are brick-coloured; the throat rufous brown, spotted with blackish; the bill is quite straight, like that of the sandpiper; the toes fringed with broad membranous festoons: it is rather larger than the preceding, being equal to a kingfisher.

The PHALAROPE with INDENTED FESTOONS.

THIRD SPECIES.

Tringa Lobata. Linn. and Gmel.

Phalaropus Lobatus. Lath. Ind.

Phalaropus. Briss.

The Gray Coot-footed Tringa. Edw.

The Gray Phalarope. Penn. and Lath.

THE scalloped festoons, which were smooth in the preceding, are here delicately indented on the edges; and this character sufficiently discriminates it. Like the first species, it has its bill flattened horizontally, a little inflated near the point, and hollowed above by two grooves; its eyes are a little drawn towards the back of its head, whose top bears a blackish spot, the rest being white, which is the colour of the whole of the fore side and under side of the body: the upper side is slaty-gray, with tints of brown, and obscure longitudinal spots. It is of the size of the jack snipe.

The GREBE.

FIRST SPECIES.

Colymbus Urinator. Linn. and Gmel.*Colymbus.* Briss.*Colymbus Major.* Aldrov. Will. Ray, Johnst. &c.*The Greater Loon, or Arisfoot.* Will.*The Greater Dobchick.* Edw.*The Tippet Grebe.* Penn. and Lath.*

THE Grebe is well known by those beautiful silvery white muffs, which have the soft closeness of down, the elasticity of feathers, and the lustre of silk. Its undressed plumage, particularly that of the breast, is really a fine down, very close and firm, and regularly disposed, whose glistening filaments lie upon each other, and join, so as to form a glassy, shining surface, equally impenetrable by cold or humidity. This clothing, so well adapted to the rigours of season and of climate, was necessary to the Grebe, which in the severest winters remains constantly in the water, like the divers; insomuch that it has often been confounded with them under the common name *colymbus* †. But the Grebes differ essentially from the divers, which have their toes com-

* In Italian *Smergo*, *Fisolo Marino*: in German *Deucchel*.† From *Κολυβαω*, to go into the water.

pletely webbed, and not edged with a scalloped membrane, parted at each toe; not to mention other distinctions, which shall be afterwards stated. Accordingly, accurate naturalists, appropriating to the divers the terms *mergus*, *uria*, and *ætbya*, restrict that of *colymbus* to the great and little Grebes.

By its structure, the Grebe is destined to inhabit the waters; its legs are placed entirely behind, and almost sunk into its belly, so that only the feet appear, and are like oars; they naturally throw themselves outwards, and could not support the body of the bird on the ground, unless it stood quite erect. In this position, the striking with its wings would, instead of raising it into the air, only overturn it; since the legs could not aid the impulsion. It requires therefore a great effort to begin its flight on land; and, as if conscious of this imbecility, it is observed to avoid the shore; and to prevent its being driven thither, it always swims against the wind*. If unfortunately a wave casts it on the brink, it continues struggling with its feet and wings, though for the most part in vain, to mount into the air, and return to the water: it may be then caught by the hand, in spite of the violent strokes it gives with its bill in defence. But it is as nimble in the water as it is feeble on land: it swims, dives, dashes through the waves, and runs on the surface with surprising rapidity;

* Oppian. *Exotic. lib. ii.*

its motions are said even to be never quicker and brisker than when under water *. It pursues the fish to a very great depth †, and is often caught in fishermen's nets. It dives deeper than the scoter duck, which is taken only on beds of shell-fish left bare by the ebb-tide; while the Grebes are taken in the open sea, often at more than twenty feet depth.

The Grebes frequent equally the sea and the fresh waters, though naturalists have scarce spoken but of those which are seen on lakes, pools, and inlets of rivers ‡. Several species occur on the coasts of Brittany, Picardy, and in the channel §. The Grebe of the lake of Geneva, which is found also on that of Zurich, and on the other lakes of Switzerland ||, and sometimes on that of Nantua, and even on certain pools of Burgundy and Lorraine, is the kind best known. It is rather larger than the coot; its length from the bill to the rump is a foot five inches, and from the bill to the nails a foot and nine or ten inches: all the upper side of the body is deep brown but glossy, and all the fore side is of a very fine silvery white. Like all the other Grebes, it has a small head, a straight and pointed bill, and from the corners a small naked red skin extends to the eye; its wings are short and

* Willughby.

† Schwenckfeld.

‡ *Idem.*

§ The little and crested Grebe, according to M. Baillon.

|| Gesner.

somewhat disproportioned to the body. The bird rises with difficulty, but after it has caught the wind, it flies far *. Its voice is loud and rough †. Its leg, or rather its tarsus, is widened and flattened laterally; the scales with which it is covered form on the hind part a double indenting; the nails are broad and flat: the tail is wanting in all the grebes, but they have on the rump the tubercles, in which the tail-quills are usually inserted, but these tubercles are smaller than in other birds, and only bear a tuft of small feathers.

These birds are commonly very fat: not only they feed their young with little fishes, they eat sea-weed and other plants ‡, and swallow mud §. White feathers too are often found in their stomach; not that they devour birds, they catch the down which plays on the water, mistaking it for a small fish. It is most probable that the Grebes, like the cormorants, cast up the residue of digestion; at least fish-bones are found rolled into pellets and unaltered at the bottom of the ventricle.

The fishers of Picardy resort to the English coast in search of the Grebes' nests, since they do not breed on that of France ||; and they find these in the holes of rocks, into which the birds

* Willughby.

† Gesner and Belon.

‡ Willughby.

§ Schwenckfeld.

|| Observations of M. Baillon.

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probably fly, since they cannot climb, and whence the young must throw themselves into the sea. But on our large pools they build with reeds and rushes interwoven, and the nest is half dipped in the water, though not entirely afloat, as Linnæus asserts, but shut and attached to the reeds *. It commonly contains two eggs, seldom three. Against the month of June the young nestlings are seen swimming with their dam †.

The genus of these birds consists of two families differing in size. To the large sort we shall appropriate the name *grebes*, and to the small, that of *cheshuts* (*castagneux*): this division is natural and ancient, and seems to be indicated by Athenæus under the terms *colymbis* and *colymbida*; since to the latter he constantly joins the epithet of *little*. There is however considerable variety in regard to size.

* Observations of M. Lottinger,

† *Idem*.

[A] Specific character of the Tippet Grebe, *Colymbus Urinator*: "Its head is smooth, its lower eye-lid yellow, a white spot on the wings." The Grebes are very attentive in feeding their young, and will even carry them when tired on their back or under their wings. Their flesh is rank, but their fat is supposed to have great virtue in rheumatic complaints. On the lake of Geneva, these birds appear in small flocks of ten or twelve: they sell fourteen shillings a-piece. The skin, with the beautiful plumage on the under side of the body, is made into muffs and tippets. This species is rare in England.

THE LITTLE GREBE.

SECOND SPECIES,

Colymbus Obscurus. Gmel.

Podiceps Obscurus. Lath. Ind.

Colymbus Minor. Briff.

The Black and White Dabchick. Edw.

The White and Dusky Grebe. Penn.

The Dusky Grebe. Lath. Syn.

THIS is smaller than the preceding, which is almost their only difference. But if that be constant, they ought to be discriminated; especially since the little Grebe is known in the channel, and inhabits the sea-coast, whereas the great Grebe occurs more frequently in fresh waters.

[A] Specific character of the *Colymbus Obscurus*: "Its head is smooth; its front, the under side of its body, and the tips of its secondary wing-quills, white."

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THE CRESTED GREBE

The CRESTED GREBE.

THIRD SPECIES.

Colymbus Cristatus. Gmel. and Briss.

Podiceps Cristatus. Lath. Ind.

Colymbus Major, Cristatus & Cornutus. Ald. Gesn. &c.

Acitli. Hernandez.

The Greater Crested and Horned Ducker. Alb. and Plot.

The Car Goose. Charleton.

The Gray or Ash-coloured Loon. Will.

The Great Crested Grebe. Penn. and Lath.

THE feathers on the crown of the head extend a little behind, and form a sort of crest, which it raises or depresses according as it is tranquil or discomposed. It is larger than the common grebe, being at least two feet from the bill to the nails : but it differs not in its plumage ; all the fore side of the body being of a fine silvery white, the upper side blackish brown, with a little white on the wings.—These colours compose the general livery of the grebes.

It appears from comparing the indications of ornithologists, that the Crested Grebe inhabits equally seas and lakes, the coasts on the Mediterranean, and those washed by the Atlantic. The species occurs even in North America, and is the *Acitli*, which Hernandez says frequents the lake of Mexico.

It has been remarked, that the Grebes of this species, and probably it is the same with the others,

220 LITTLE CRESTED GREBE.

others, acquire not till after moulting their fine satin white. The iris, which is always very brilliant and reddish, becomes inflamed, and assumes a ruby tint, in the season of love. This bird is said to destroy numbers of young whitings and sturgeons' fry, and, when in want of other food, to eat shrimps *.

• Observations made in the Channel, by M. Baillon, of Montreuil-sur-mer.

[A] Specific character of the Crested Grebe, *Colymbus Cristatus*: "Its head is rufous, its neck black, its secondary wing-quills white." These birds are frequent in the fens of Lincolnshire, and on the meres of Shropshire, Cheshire, and Staffordshire, where they breed. Their skins are made into tippets equally valuable with those from Geneva. Mr. Latham reckons the Crested Grebe to be the adult, and the Tippet Grebe the young bird of the year's hatch,

The LITTLE CRESTED GREBE,

FOURTH SPECIES,

Colymbus Auritus. Gmel.

Podiceps Auritus. Lath. Ind.

The Eared Dabchick. Edw.

The Eared Grebe, Penn. and Lath.

THIS Grebe is not larger than a teal, and differs from the preceding not only in size, but also because the feathers on the crown of the head, which compose the crest, are parted into two tufts, and that spots of chesnut-brown mix with the white on the fore side of the neck.

With

With respect to the identity supposed by Brisson between this species and "the greater ash-colored ducker" of Willughby, it is difficult to decide; since that naturalist and Ray form their description merely from a drawing of Brown's.

[A] Specific character of the *Colymbus Auritus*: "Its head is black, crested with ferruginous ears."

The H O R N E D G R E B E .

F I F T H S P E C I E S .

Colymbus Cornutus. Gmel.

Podiceps Cornutus. Lath.

The Eared or Horned Dabchick. Edw.

THIS Grebe has a black tuft, divided behind as it were into two horns; it has also a sort of mane, rufous at the root, black at the point, cut round the neck; which gives it a very odd look, and makes it to be regarded as a monstrous species. It is rather larger than the common grebe; its plumage is the same, except the mane and the flanks, which are rufous.

This Horned Grebe seems to be extensively spread: it is known in Italy, in Switzerland, in Germany, in Poland, in Holland, and in England. As it is of a very singular figure, it has been every where remarked. Fernandez describes

222 LITTLE HORNED GREBE.

scribes with accuracy one found in Mexico ; and adds, that it is called the *water hare*, but does not assign the reason.

[A] Specific character of the *Colymbus Cornutus* : " Its head is " glossy-green, with a yellow bar at its eye, extended behind like " a crest."

The LITTLE HORNED GREBE.

SIXTH SPECIES.

Podiceps Cornutus, var. Lath.

Colymbus Cornutus Minor. Briff.

THERE is the same difference with regard to bulk between the two horned grebes as between the two crested grebes. The little Horned Grebe has two pencils of feathers, which growing out from behind the eyes, form its horns of an orange rufous : this is also the colour of the fore side of the neck and of the flanks ; the top of the neck is clothed with puffed feathers, not broken, however, or intersected by a ridge ; these feathers are brown tinged with greenish, and so is the upper side of the head : the mantle is brown, and the breast silvery white, as in the other grebes. It is of this in particular that the nest is said by Linnæus to float on the water : he adds, that it lays four or five eggs, and that the female is entirely gray*.

* *Fauna Suecica*, N° 123.

It is known in most countries of Europe, whether maritime or inland. Edwards received it from Hudson's Bay *. But its being found in North America is no reason why Brisson should infer that it is the same with the *Yacapitzaboac* of Fernandez; which indeed appears to be a grebe, but is not sufficiently characterized. With regard to the *Trapazorola* of Gesner, as likewise of Brisson, it is most probably a *chefnut*; at least it is not a horned grebe, since Gesner expressly mentions its having no crest.

* We will not hesitate to refer the *Eared Dobchick* of that same naturalist, notwithstanding some differences in dimensions, to the Little Horned Grebe.

The BLACK-BREASTED GREBE.

LE GREBE DUC-LAART. *Buff.*

SEVENTH SPECIES.

Colymbus Thomensis. Gmel.

Podiceps Thomensis. Lath.

Colymbus Insulæ St. Thomæ. Briss.

THIS Grebe is called the *laart duck* in the island of St. Thomas, where Father Feuillée observed and described it. What distinguishes it most, is a black spot in the midst of its

its fine white breast-plate, and the colour of its wings, which is pale rufous. It is as large, he tells us, as a pullet: he remarks also, that the point of its bill is slightly curved, a property which belongs equally to the following species *.

* Thus described by Brisson: "Above, dull brown; below, "white, variegated with gray spots; a bright white spot on either "side between the bill and the eye; a black spot on the middle of "the breast; the wing-quills pale rufous."

The LOUISIANA GREBE.

EIGHTH SPECIES.

Colymbus Ludovicianus. Gmel.

Podiceps Ludovicianus. Lath.

BESIDES that its bill has a gentle curvature at the tip, its breast is entirely white; its flanks are deeply stained with brown and blackish, and the fore side of its neck blackish. It is smaller than the common grebe.

[A] Specific character of the *Colymbus Ludovicianus*: "Its "head is smooth and brown, its body brown, its sides ferruginous, "the middle of its breast white."

The RED-NECKED GREBE.

LE JOUGRIS*. *Buff.*

NINTH SPECIES:

Colymbus Rubricollis. } Gmel.
Colymbus Subcristatus. }
Podiceps Rubricollis. Lath.

THE cheeks and chin are gray; the fore side of the neck is rufous, and the upper surface dark brown. It is nearly as large as the horned grebe.

* i. e. Joes Grises, or Gray Cheeks.

The GREAT GREBE.

TENTH SPECIES.

Colymbus Cayennensis. Gmel.
Podiceps Cayanus. Lath. Ind.
The Cayenne Grebe. Lath. Syn.

THE epithet *great* is due more to the length of its neck than to the bulk of its body: its head is raised three or four inches higher than that of the common grebe. Its upper

surface is brown; the fore side of its body rufous brown, which extends also on the flanks, and shades the white of the breast. It is found in Cayenne.

FROM the enumeration we have made, it appears, that the species of Grebes are diffused through both continents; they seem dispersed from pole to pole. The *Kaarfaak* * and the *Esfaroki-fok* of the Greenlanders are probably grebes: and in the antarctic regions, M. Bougainville found, at the Malouine islands, two birds which appear to belong to this genus rather than to the divers †.

[A] Specific character of the *Colymbus Cayennensis*: "Its head is smooth, its throat rufous, its breast and belly white."

* "The bird which the Greenlanders call *kaarfaak*, expressing its cry by that name, is a sort of *colymbus*: according to them, it foretells rain or fine weather, according as its tone of voice is hoarse and rapid, or soft and lengthened out. They also call it the *summer bird*, because its appearance announces that joyous season. The female lays near pools of fresh water, and it is pretended that she is so much attached to her brood as to sit even when the place is overflowed." *Hist. Gen. des Voyages*, tom. xix. p. 45. The Greenland duck with a pointed bill, and a tuft on its head, mentioned by Crantz, appears also to be a grebe. See *ibid.* p. 43.

† "In the Malouine islands there are two species of small divers; the one has its back of an ash-colour, and its belly white; the feathers of the belly are so filky, so brilliant, and so close, that we took it for the grebe, which furnishes the materials of precious muffs: this species is rare. The other, more common, is entirely brown, having its belly somewhat lighter than its back; its

" its eyes are like rubies, and their wonderful vivacity is height-
 " ened by the contrast with a circle of white feathers that surround
 " them, and which has given occasion to the name of *spectacle diver*.
 " It has two young, too delicate no doubt to bear the coolness of
 " the water when they are clothed only with down, for the mother
 " then carries them on her back. These two species have not their
 " feet palmated, like other water fowl; their toes are parted, and
 " furnished on each side with a very strong membrane; in this
 " state, each toe resembles a leaf rounded towards the nail, and the
 " more so, as from the toe lines proceed to terminate in the extre-
 " mity of the membranes, and as the whole has the green colour of
 " leaves, without much thickness."—*Voyage autour du Monde, par*
de Bougainville, tom. ii. p. 117, 118.

The C H E S N U T

LE CASTAGNEUX. *Buff.*

F I R S T S P E C I E S.

Colymbus Minor. Gmel.*Podiceps Minor.* Lath. Ray, and Will.*Colymbus Fluviatilis.* Briss.*Mergus Parvus Fluviatilis.* Gefner.

<i>The Didapper, Dipper, Dobchick,</i>	} Will.
<i>Small Doucker, Loon, or Arsefoot.</i>	

The Little Grebe. Penn. and Lath.

WE have said, that the Chesnut is much smaller than the other grebes: we may even add, that, except the stormy petrel, it is the least of all the swimming birds. It resembles the petrel also, in being clothed with down instead of feathers. But its bill, its feet, and all its body, are exactly like those of the grebes: its colours are nearly the same, but, as its back is of a chesnut-brown, it has been termed the *castagneux*. In some individuals, the fore side of the body is gray, and not of a glossy white; in others, they are more inclined to blackish than to brown on the back; and this variety in the colours has been remarked by Aldrovandus. Like the grebes, the Chesnut wants the power of



THE LITTLE GREBE.

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of standing and walking on the ground; its legs trail and project behind, and cannot support it*: with difficulty it rises, but when once it has mounted, it flies to a great distance. It is seen on the rivers the whole winter, at which time it is very fat. Though called the *river grebe*, it is seen also on the sea-shore, where it eats shrimps and smelts†, as it likewise feeds on young crabs and small fish in fresh waters. We have found particles of sand in its stomach; this is muscular, and lined with a glandulous membrane, thick and inadhesive: the intestines, as Belon observes, are very weak; the two legs are attached behind the body by a membrane, which projects when they are extended, and is fastened very near the joint of the tarsus; above the rump, and instead of a tail, are two small pencils of down, which rise each out of its tubercle: it is also observed, that the webs of the toes have a border indented with little scales ranged regularly.

We conceive the *Tropazorola* of Gesner to be the same bird: that naturalist says, that the former appears, after winter, on the lakes of Switzerland.

* Belon.

† *Idem.*

[A] Specific character of the *Colymbus Minor*: "It is scarlet, below white and spotted, its head smooth."

The PHILIPPINE CHESNUT.

SECOND SPECIES.

Colymbus Minor, var. Gmel.

THOUGH not larger than the preceding, it is distinguished by two great streaks of rufous, which stain the cheeks and the sides of the neck, and also by a purple tinge spread on the upper surface: perhaps it is only the same bird, modified by climate. We might pronounce with more certainty, if the limits which separate them, or the chain that connects them, were better known:—But who can trace the genealogy of nature's families?

The CIRCLED-BILL CHESNUT.

THIRD SPECIES.

Colymbus Podiceps. Linn. and Gmel.

Podiceps Carolinensis. Lath. Ind.

Colymbus Fluvialis Carolinensis. Briss.

Colymbus Fuscus. K'in.

The Pied-bill Dabchick. Catesby.

The Pied-bill Grebe. Penn. and Lath.

ALITTLE black ring, which encircles the middle of the bill, serves to distinguish this Chesnut. It has also a remarkable black spot
at

at the base of the lower mandible; its plumage is entirely brown, deep on the head and neck, light and greenish on the breast. It is found on pools of fresh water, in the settled parts of Carolina.

The ST. DOMINGO CHES- NUT.

FOURTH SPECIES.

- Colymbus Dominicus.* Linn. and Gmel.
- Podiceps Dominicus.* Lath. Ind.
- Colymbus Fluviatilis Dominicensis.* Briss.
- The Twopenny Chick.* Hughes Barbadoes.
- The White-winged Grebe.* Lath. Syn.

THIS is smaller than the European Chesnut; its length, from the bill to the tail, scarce seven inches and a half; it is blackish on the body, and silvery light gray, spotted with brown, below.



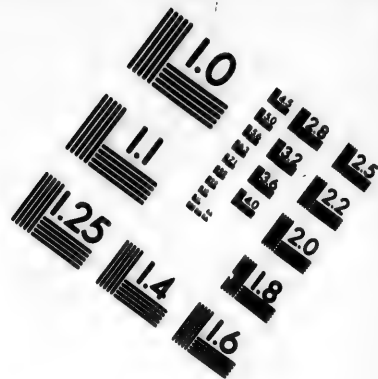
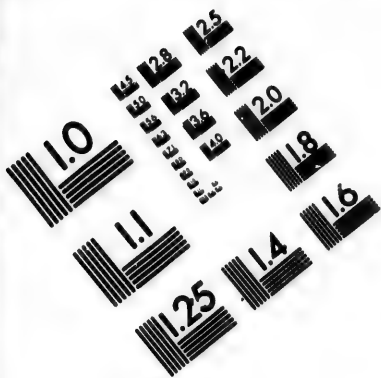
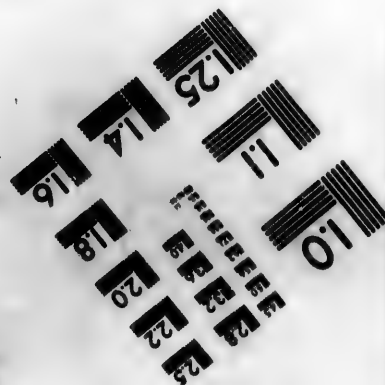
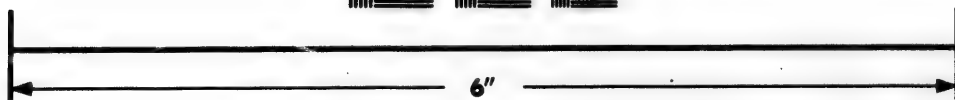
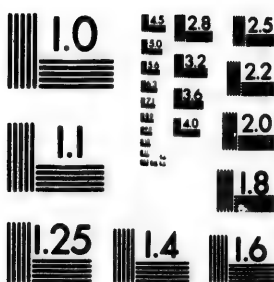


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The C O O T - G R E B E.

F I F T H S P E C I E S.

NATURE never proceeds by starts: she fills up all the intervals, and connects remote objects, by a chain of intermediate productions. The Coot-Grebe, hitherto unknown, is related to both these *genera* of birds. Its tail is pretty broad and its wings long; all its upper surface is olive brown, and all the fore side of the body is a very fine white; the toes and their webs are barred transversely with black and white or yellow stripes, which produces an agreeable effect. It was sent to us from Cayenne, and is as small as our chesnut.

The DIVERS*.

LE PLONGEONS. *Buff.*

THOUGH many aquatic birds dive even to the bottom of the water in pursuit of their prey, the name of *Diver* has been appropriated to a small family, distinguished from the rest by their strait pointed bill, and their three fore toes connected together by an entire membrane, which throws a hem along the inner toe, from which the hind one is parted: their nails are also small and pointed; their tail is extremely short, and scarce visible; their feet are very flat, and placed quite behind the body; lastly, their leg is concealed in the lower belly, a disposition well adapted for swimming, but almost incompatible with walking. In fact, the Divers, when on land, are obliged, like the grebes, to stand erect, and cannot maintain their balance: but in the water their motions are so nimble and prompt, that, the instant they perceive the flash of a gun, they plunge and escape the ball †.

* The general name of the Diver in Greek, is *Αἰθια*: in Latin *Mergus*: in Hebrew and Persian *Kaith*: in Arabic *Semag*: in Italian *Mergo*, *Mergone*: in German *Ducher*, *Duchent*, *Taucher*.

† "The Divers of Louisiana are the same with ours, and when they see the fire of the touch-pan, they dive so nimbly, that the lead cannot hit them; for which reason they are called *lead-eaters*." Le Page Dupratz, *Hist. de la Louisiane*, tom. ii. p. 115.

Accordingly,

Accordingly, expert fowlers fasten a bit of paste-board to their piece, in such manner as to leave the aim free, and yet screen from the bird the gleam of the priming.

We know five species of Divers, two of which, a greater and a lesser, occur equally on the fresh waters of inland countries, and on the salt flood near the sea-shore : The three other species seem to be attached wholly to the coasts, particularly in the north.

The G R E A T D I V E R .

F I R S T S P E C I E S .

Colymbus Immer. Linn. and Gmel.

Mergus Major. Briss.

Colymbus Maximus. Gefn. Aldrov. Ray, Johnst. and Klein,

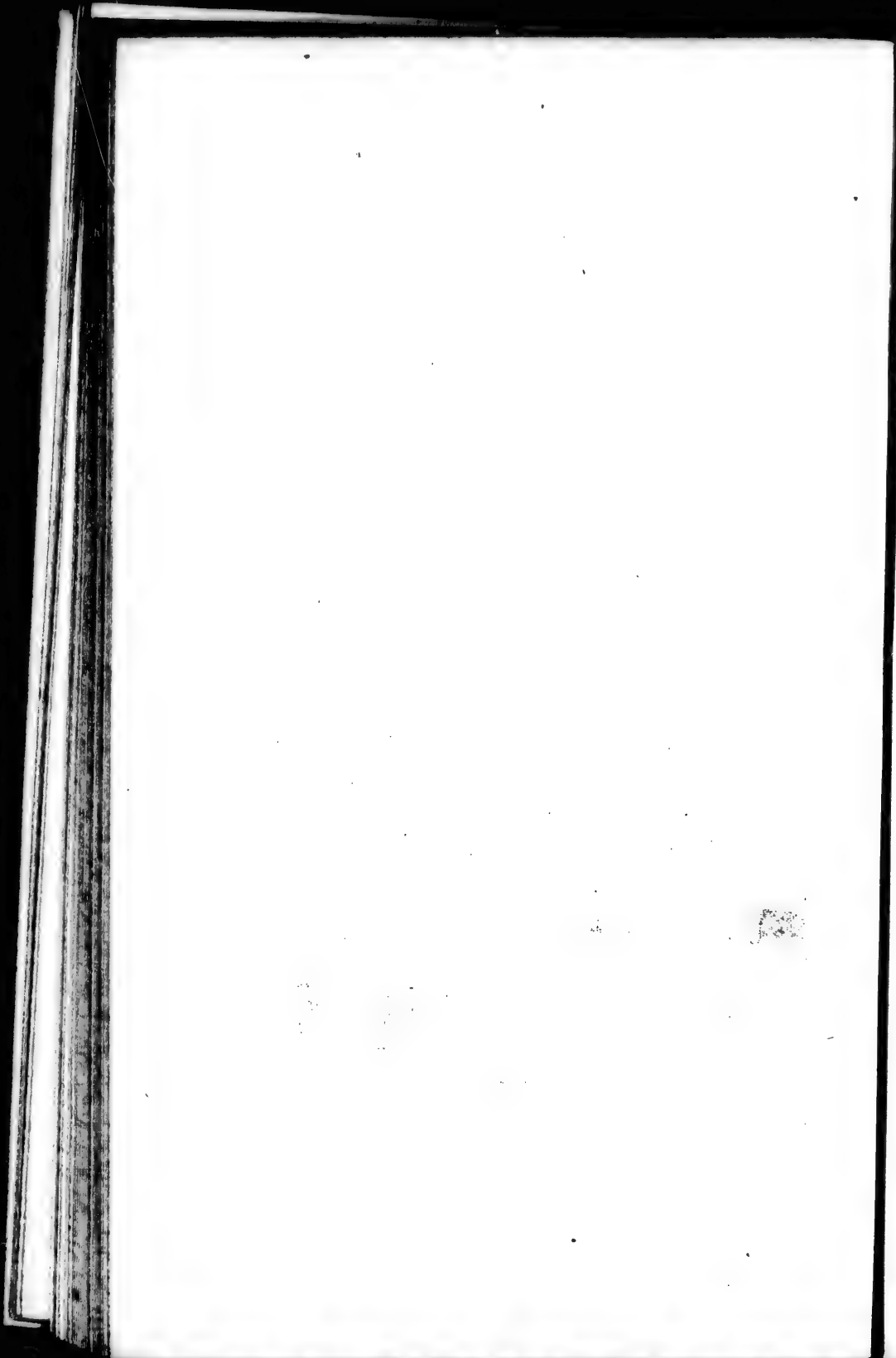
The Imber Diver. Lath.

THIS Diver is almost as large and as tall as the goose. It is known on the lakes of Switzerland ; and the name *Fluder*, which it receives on that of Constance, alludes, according to Gefner's remark, to its laborious motion on land, struggling at once with its wings and its feet. It never rises but from the water ; and in that element its motions are as easy as they are rapid.

N^o 213



THE IMBER.



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rapid. It dives to very great depths, and swims under water to the distance of an hundred paces without emerging to take breath: a portion of air included in its dilated wind-pipe supplies its respiration during this interval. The same is the case with other divers and grebes; they glide through the water freely in all directions; in it they find their food, their shelter, their asylum: when the bird of prey hovers above them, or the fowler appears on the shore, they plunge for safety. But man, still more formidable by his address than by his strength, prepares snares for them, even in the bottom of their retreat: a net or a line baited with a small fish, allures the unwary bird; it swallows death with the repast, and perishes in that element where it received birth; for its nest is placed on the water amidst the tall rushes.

Aristotle justly observes, that the Divers begin to breed in early spring, and that the gulls do not breed till the end of that season, or the beginning of summer*. But Pliny, who often merely copies the philosopher, has here injudiciously contradicted him, by employing the name *Mergus* to signify an aquatic bird which nestles in trees†; a property which belongs to

* Hist. Animal. lib. v. 9.

† *Mergi* 'S' in arboribus pariunt, lib. x. 32. He likewise confounds the Diver with certain gulls, when he attributes to it the habit of devouring the excrements of other birds. *Mergi soliti sunt devorare quæ ceteræ reddunt*, lib. x. 47.

the cormorant and some other aquatic birds, but which has no relation to the Divers, since they nestle at the foot of rushes.

Some observers have asserted that the Great Diver was very silent: yet Gesner ascribes to it a singular and loud cry; but probably this is seldom heard.

Willughby seems to admit a variety, in which the back is of an uniform colour; whereas, in the ordinary kind, the upper surface is waved with light gray on a brown gray, and this brown, clouded and dotted with whitish, appears on the upper side of the head and neck, which is besides ornamented below by a half collar tinged with the same colours, terminated with fine white on the breast and the under side of the body.

[A] Specific character of the *Colymbus Immer*: "Its body is "blackish above, waved with white, below entirely white."

The LITTLE DIVER.

SECOND SPECIES.

Colymbus Stellatus. Gmel.*Colymbus Maximus Caudatus.* Will.*Mergus Minor.* Briss.*The Speckled Loon.* Alb.*The Speckled Diver.* Penn. and Lath.

THIS Diver resembles the preceding in its colours, and has likewise all the fore side of its body white: its back, and the upper side of its neck and head, are blackish-cinereous, entirely sprinkled with little white drops. The largest of this kind measure at the utmost a foot nine inches from the tip of the bill to the end of the tail, and two feet to the extremity of the toes, and the alar extent is two feet and an half; whereas the preceding species is two feet and an half from the bill to the nails, and four feet across the wings. Their natural habits are nearly the same.

The Little Divers are seen at all times on our pools, which they do not quit till the ice obliges them to flit to the rivers and brooks of running water: they depart in the night-time, and remove as little as possible from their former haunts. It was remarked, even in the time of Aristotle,

Aristotle, that they did not disappear in winter*. That philosopher also says, that they lay two or three eggs: but our sportsmen make them to lay three or four, and say, that when a person approaches the nest, the mother plunges into the water, and that the young ones just hatched throw themselves after her. The swimming and diving of these birds are always attended with noise, and with a very quick agitation of their wings and tail. The motion of their feet impels them forward, not in the line of their body, but sidewise in the diagonal. M. Hebert observed this in a captive Diver, which being held by a long string, took always that direction: it appeared to have lost nothing of its natural liberty: it was kept on a river, where it lived by catching small fish.

* Hist. Animal. lib. v. 9.

[A] The speckled Diver lays its eggs near the verge of maritime lakes: they are oval, dusky with some black spots, and as large as those of a goose.

The SEA-CAT DIVER.

THIRD SPECIES.

THIS Diver, which is very like the little fresh-water Diver, was sent to us from the coasts of Picardy, which it frequents, particularly

larly in winter, and where it is called by the fishers *cat-marin*, because it eats much young fry. They are often caught in the nets spread for the scoter-ducks, with which they generally arrive; for they are observed to retire in summer, as if they spent that season in more northern countries. Some, however, breed in the Scilly isles on the rocks, which they gain by springing from the water, having taken advantage of a swell: for, like the other Divers, they can hardly rise from the land*; nor can they even run but on the waves, which they rapidly graze in an erect attitude, the lower part of their body being immerfed.

This bird enters with the tide into the mouths of rivers. It prefers small smelts, and the fry of the sturgeon and conger. As it swims almost as fast as other birds fly, and dives as well as fish, it has every possible advantage for seizing its fugitive prey.

The young ones, less dextrous and less experienced than the old, subsist only on shrimps; yet both are, at all seasons, extremely fat. M. Baillon, who has carefully observed these Divers on the coasts of Picardy, and who has furnished

* "I one day found two of these Divers, which had been cast ashore by the waves; they were lying on the sand, working their feet and wings, and crawling with difficulty: I gathered them like stones, yet they were not wounded; and one of them thrown up, flew, dived, and played on the water before my eyes." *Observation communicated by M. Baillon, of Montreuil-sur-mer.*

us with these details, subjoins, that the female is distinguished by being two inches shorter than the male, which measures two feet three inches from the point of the bill to the end of the nails, and its alar extent three feet two inches: the plumage of the young ones, till moulting, is a smoky black, without any of the white spots sprinkled on the back of the adults.

We shall refer to this kind, as a variety, a black-headed Diver, which Brisson makes his fifth species, and applies to it the names given by Willughby and Ray, which refer only to the northern Diver.

It has been remarked, though not with regard to any particular species of Divers, that the flesh of these birds is improved by living, in Lough Foyle, near Londonderry in Ireland, on a certain plant, whose stalk is soft, and almost as sweet, it is said, as a sugar-cane.

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THE NORTHERN DIVER .

The IMBRIM, or GREAT NORTHERN DIVER.

FOURTH SPECIES.

Colymbus Glacialis. Linn. and Gmel.

Mergus Major Nævius. Briss.

Colymbus Maximus Stellatus. Sibb.

Colymbus Maximus Caudatus. Ray, Will. and Klein.

The Greatest Speckled Diver, or Loon. Alb.

The Northern Diver *. Penn. and Lath.

IN the Feroe islands this Great Diver is called the *Imbrim*, and in the Orkneys *Embergoose*. It is larger than a goose, being near three feet from the bill to the nails, and four feet over the wings: it is also remarkable by a furrowed collar about the neck, marked by small longitudinal stripes, alternately black and white: the ground on which this belt lies is black, with green reflections on the neck, and violet ones on the head: the mantle is black, entirely sprinkled with white speckles; all the under side of the body is fine white.

* In Norwegian *Brusen*: in Icelandic *Huubryr*, according to Anderson, who says that this bird much resembles the vultur by its bulk and its cries; but this pretended vultur is a merganser.

This Great Diver appears sometimes in England in hard winters*; but at other times it never leaves the northern seas, and its usual retreat is among the Orkneys, the Feroe islands, on the coasts of Iceland, and near Greenland; for it is evidently the *Tuglek* of the Greenlanders†.

Some writers of the north, such as *Hoierus*, physician at Bergen, have asserted that these birds make their nests and lay their eggs under water; which is not even probable‡: and the account inserted in the Philosophical Transactions§, that the Imbrim hatches her eggs by carrying them under her wings, appears to me equally fabulous. All that we can infer from these stories is, that this bird probably breeds on shelves or desert coasts, and that no observer has yet seen its nest.

* Ray.—We received one that was killed this winter (1780) on the coast of Picardy.

† “The *Tuglek*,” says Crantz, “is a diver of the bulk of a turkey-cock, and of the colour of a stare; its belly white, and its back sprinkled with white; its bill is straight and pointed, an inch thick, and four inches long; its length from the head to the tail is two feet, and its alar extent two feet.” *Hist. Gen. des Voyages*, tom. xix. p. 45.

‡ Klein justly refuses to credit the report.

§ N° 473. p. 61.

[A] Specific character of the *Colymbus Glacialis*: “Its head and neck are dark violet; a white interrupted bar on its throat and neck.” In the northern regions, every pair of these birds occupy a lake, and breed on the small islets. The young defend themselves courageously with their bills. The Greenlanders use the skins for cloathing, and the Esquimaux deck their heads with the feathers.

The LUMME, or LITTLE DIVER of the NORTHERN SEA.

FIFTH SPECIES.

Colymbus Arcticus. Linn. Gmel. Sibb. and Will.

Mergus Gutturæ Nigro. Briss.

Mergus Arcticus simpliciter. Klein.

The Black-throated Diver *. Edw. Penn. and Lath.

LUMME or *Loom* in Lapponic signifies *lame*, alluding to the tottering pace of this bird when on land: it seldom however comes ashore, but swims almost constantly, and breeds at the verge of the flood on desert coasts. Few have seen its nest, and the people of Iceland say that it hatches its eggs under its wings in open sea †; which is not more probable than the incubation of the imbrim under water.

The Lumme is smaller than the imbrim, and about the bulk of a duck; its back is black sprinkled with little white squares; the throat is black, and also the fore side of the head, of which the upper side is covered with gray feathers; the top of the neck is clothed with simi-

* In Swedish and Lapponic *Loom* or *Lom*: in Greenlandic *Apa*, according to Anderson, and *Moquo*, according to Edwards.

† Anderson.

lar gray feathers, and ornamented behind by a long patch clouded with black, varying with violet and green : a thick down, like that of the swan, covers all the skin ; and the Laplanders make winter bonnets of these fine furs *.

It appears that these Divers scarcely ever quit the northern seas ; though, according to Klein, they visit from time to time the coasts of the Baltic, and are well known through the whole of Sweden †. Their principal abode is on the shores of Norway, Iceland, and Greenland : these they frequent the whole summer, and there breed their young, which they rear with singular care and solicitude. On this subject, Anderson gives details which would be interesting, were they all accurate. He says that they lay only two eggs, and that as soon as a young Lumme is able to quit the nest, the parents lead it to the water, the one flying always above it to keep off the bird of prey, and the other below to receive it in case it should fall ; and that if notwithstanding their assistance, the nestling fall to the ground, the parents rush after it, and rather than forsake it, they suffer themselves to be caught by men or eaten by foxes, which ever watch those opportunities, and which, in those bleak frozen regions, are constrained to turn all their sagacity and wiles against the birds. This

* *Fauna Suecica*, and *Hist. Gen. des Voyages*, tom. xv. p. 309.

† *Fauna Suecica*.

author adds, that when the Lummes have once reached the sea with their young, they return no more to land. He affirms even that the old ones which have accidentally lost their family, or are past breeding, never revisit the shore, but swim always in flocks of sixty or a hundred. "If we throw a young one into the sea before a flock of Lummes, they will all gather round it, and strive to attend it; nay they will fight about it till the victor leads it off: but if the mother happen to intervene, the quarrel immediately ceases, and the infant is consigned to her care."

On the approach of winter, these birds retire, and appear not again until the spring. Anderson conjectures, that, shaping their course between the east and the west, they arrive in America: and Edwards in fact admits that this species is common both to the northern seas of that continent and of Europe. We might add those of Asia; for the red-throated diver brought from Siberia, and represented under that name in our *Pl. Enl.* is exactly the same with that of Edwards, *pl.* 97, which this naturalist gives as the female Lumme from the unimpeached veracity of his correspondent Isham, a good observer, who sent both cock and hen from Greenland.

When the Lummes visit the coasts of Norway, their different cries are interpreted by the inhabitants to presage fine weather or

rain *. This is probably the reason why they spare the lives of these birds, and are concerned to find them taken in their nets †.

Linnæus distinguishes a variety in this species ‡, and says with Wormius, that the Lumme makes its nest flat on the beach at sea-mark : on that head, Anderfon contradicts himself. The Spitzbergen *Lumb* of Martens appears, according to Ray's observation, to be different from the Lummes of Greenland and Iceland, since *its bill is hooked* : yet its attachment to its young, and the manner in which it leads them to the sea, defending them from the bird of prey, show a great analogy to these birds in its natural habits §. With regard to the *Loms* of the navigator

* " When it foresees abundant rains, fearing that its nest will be overflowed, it strikes the air with a querulous sound ; on the contrary, when it expects fine weather, it cheers its young with loud calls and another more grateful sound."—*Wormius*.

† *Idem*.

‡ " A variety, whose head and sides of its neck are cinereous ; the hind part of its neck marked with small black and white lines ; its back brown, without the white dots ; its breast spotted before with cinereous and white." *Fauna Suecica*, N° 121.

§ " The bill of the *Lumb* resembles much that of the diver pigeon, except that it is somewhat harder and more hooked. This bird is as large as a middling duck . . . the young are commonly seen near the old ones, which instruct them to swim and dive ; the old transport their brood from the rocks into the water, by taking them in their bill ; the burgomaster, which is a bird of prey, seeks to carry them off . . . but these birds are so attached to their young, that they will rather be killed than forsake them, and they defend them as a hen does her chickens ; they cover them as they swim . . . they fly in large flocks, and
" their

gator Barentz, they may be the same with our Lummes, which might easily frequent Nova Zembla *.

"their wings are shaped like those of swallows; in flying they exercise these extremely . . . their cry is very disagreeable, and nearly like that of a raven, nor is there any bird that cries more than this, unless perhaps the *quinter rotger*."—*Recueil des Voyages du Nord*, tom. ii. p. 95.

* "The name of *Loms*, which Barentz gives to this bay (in the Icy Sea, under Nova Zembla) was taken from a species which abounds there, and which, according to the signification of the Dutch word, are excessively unwieldy; their body is so large in comparison of their wings, that one is surprized that they can raise so cumbrous a weight. These birds make their nests on craggy mountains, and cover only one egg at a time. The sight of men disturbs them so little that we may take one in its nest, and yet the rest will not fly away, or even shift their place."—*Hist. Gen. des Voyages*, tom. xv. p. 104.

[A] Specific character of the *Colymbus Arcticus*: "Its head is hoary, the under side of its neck dark violet; a white interrupted bar."

The M E R G A N S E R.

LE HARLE *. *Buff.*

F I R S T S P E C I E S.

Mergus Merganser. Linn. and Gmel.*Merganser.* Gefn. Ald. Johnst. Will. Sibb. Briss. &c.*The Goosander, male; Dun-diver, or Sparling-fowl, female.* Will.

"**T**HIS bird," says Belon, "commits as
 "much havock in a pool as a beaver;"
 and hence, he adds, it was termed *bievre*. But the
 old naturalist was here deceived with the vulgar,
 for the beaver does not eat fish; and the *otter*
 is the animal to which this *ichthyophagous* bird
 should be compared.

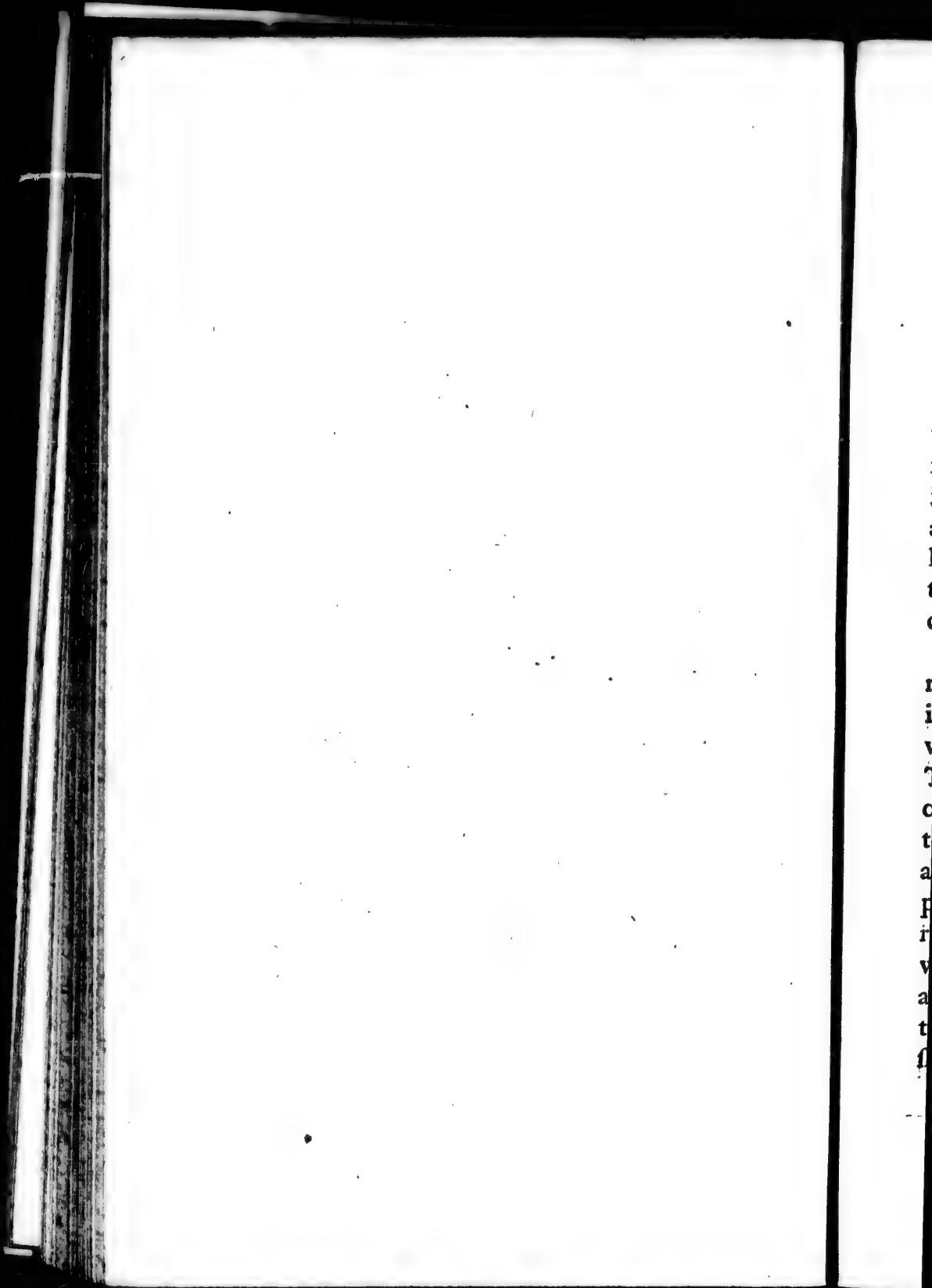
The Merganser is of a middle size, between
 the duck and the goose: but in its stature, its
 plumage, and its short flight, is more allied to
 the duck. Its name, *diver-goose*, (*mergus-anser*)
 seems to have been formed by Gesner injudici-
 ously; for the resemblance of its bill to that of

* In German *Meer-rach*, *Welch-cent*: on the lake of Constance
Gan or *Ganner*: on the lake Maggiore *Garganey*: in Polish *Kruk*
morfski: in Norwegian *Fisk-and*, *Mort-and*: in Swedish *Wrakfogel*,
Kjorkfogel, *Ard*, *Skraka*: in Danish *Skallesluger*: in Icelandic
Skior-and: in the language of Greenland *Pekfok*.

N^o 215



THE GOOSANDER .



the diver, on which that appellation rests, is very imperfect. The bill is nearly cylindrical, and strait to the point, like that of the diver; but differs inasmuch as the point is bent in the fashion of a crooked nail, with a hard, horny substance; it differs also because the edges are beset with indentings reflected backwards: the tongue is rough, with hard *papillæ* turned backwards like the indentings on the bill, which serve to hold the slippery fish, and even to draw it into the throat of the bird: accordingly, with a gluttonous voracity, it swallows fish much larger than can enter entire into its stomach: the head first lodges in the œsophagus, and is digested before the body can descend.

The Merganser swims with all its body submerged, and only its head out of the water*: it dives deep, remains long under water, and traverses a great space before it again appears. Though its wings are short, it flies rapidly, and oftenest it shoots above the surface of the water†: it then appears almost entirely white, and is therefore denominated *harle blanc* in some parts of France, as in Brie, where however it is rare. Yet the fore side of its body is washed with pale yellow: the upper side of the neck and all the head are black, changing by reflections into green; and the feathers, which are slender, silky, long, and bristled up from the nape

* Aldrovandus and Wormius.

† Rzeczynski.

to the front, augment much the bulk of the head : the back consists of three colours, black on the top and on the great coverts of the wings, white on the middle ones and most of the coverts, and handsomely fringed with gray upon white at the rump : the tail is gray : the eyes, the feet, and part of the bill, are red.

The Merganser, we have seen, is a very beautiful bird ; but its flesh is dry and unpleasant food *. The form of its body is broad and sensibly flattened on the back. Its wind-pipe is observed to have three swellings, the last of which, near the bifurcation, includes a bony labyrinth † : this apparatus contains the air which the bird respire under water ‡. Belon says also, that he remarked that the tail of the Merganser was often rumped and turned up at the end, and that it perches and builds its nest, like the cormorant, on trees or rocks : but Aldrovandus asserts, with more probability, that it breeds on the shore, and never quits the water. We have not been able to ascertain this fact ; these birds appear only at distant intervals in France, and from all the accounts which we have received, we can only gather that they occur in different places, and always in win-

* Belon relates the vulgar proverb, *He who would regale the devil, might serve him with merganser and cormorant.*

† Willughby.

‡ Belon.

ter *. In Switzerland their appearance on the lakes is supposed to forebode a severe winter: and though they must be known on the Loire, since there, according to Belon, they received the name of *harle* or *berle*, that observer himself intimates, that they retire in winter to more southern climates, for he saw them entering from the north into Egypt; yet he says, that in every other season except winter they are found on the Nile, which is difficult to reconcile.

The Mergansers are not more common in England than in France †; yet they penetrate into Norway ‡, Iceland §, and perhaps still farther north. The *Geir-fogel* of the Icelanders, which Anderson improperly calls a vulture, is a Merganser; at least if its voracity may entitle it to the appellation of sea vulture. But it seems these birds do not constantly reside on the coast of Iceland; since every time they arrive, the inhabitants expect some great event.

The female Merganser is uniformly smaller considerably than the male: it differs also, like most of the water birds, by its colours; its head

* Merganser killed the 15th of February 1778, at Montbard, on a pool, where it had been seen for several days.—Merganser killed near Croisic, on the salt marshes.—*Letter of M. de Querboënt, of the 13th of February.*—Merganser killed at Bourbon-lancy, and sent to M. Hebert in March 1774.

† Charleton.

‡ Muller.

§ Wormius, Charleton.

is rufous, and its mantle gray *. Brisson makes it his seventh species.

* It is the female which Belon styles the *beaver*. Linnæus, in the twelfth edition of his *Systema Naturæ*, under the name *Mergus-Castor*.

[A] Specific character of the *Mergus-Merganser*: "Its crest longitudinal and somewhat erect; its breast whitish and spotless; its tail-quills cinereous, their shaft blackish." Linnæus says, that these birds breed sometimes on trees and sometimes between stones, and lay fourteen eggs. They pass the whole year in the Orkneys, yet never appear in England except in hard winters. They are found not only in the north of Europe, but in the greater part of North America.

The CRESTED MERGANSER.

LE HARLE HUPPE'. *Buff*.

SECOND SPECIES.

Mergus-Serrator. Linn. and Gmel.

Serrator Cirrbatus. Klein.

Mergus Cristatus. Brisson.

The Serula. Will.

The Lesser Dun Diver. Penn.

The Lesser Toothed Diver. Morton.

The Red-breasted Merganser. Lath.

THE preceding species had only a tuft; this is adorned with a distinct and well-formed crest, consisting of slender, long plumules, directed backwards from the occiput: it is about
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the size of a duck : its head and the top of its neck are of a violet black, changing into gold green : the breast is rufous variegated with white ; the back is black ; the rump and the flanks are striped in zig-zags with brown and light gray ; the wing is variegated with black, with brown, with white, and with cinereous ; on both sides of the breast, near the shoulders, there are pretty long white feathers edged with black, which cover the pinion when the wing is closed ; the bill and feet are red. The female is distinguished from the male by its head being of a duller rufous, its back gray, and all the fore side of its body white, faintly tinged with fulvous on the breast.

According to Willughby, this species is very common on the lagoons of Venice ; and since Muller affirms that it is found in Denmark and Norway, and Linnæus, that it also inhabits Lapland *, it probably frequents the intermediate countries. In fact, Schwenckfeld assures us, that this bird passes into Silesia, where it is seen in the beginning of winter on the pools among the mountains. Salerne says that it is very common on the Loire ; but from his manner of speaking of it, he seems to have observed it very inattentively.

* The *Knipa* of Schoeffer, *Fauna Suecica*.

[A] Specific character of the Crested Merganser, *Mergus-Serrator* : " Its crest is hanging ; its breast tawny and variegated ;
" its

"its neck white; its tail-quills brown, variegated with cinereous." In Iceland these birds are called *Vatus-ond*. They appear in great flocks during the summer in Hudfon's Bay, and on the Siberian lakes.

The PIETTE, or LITTLE CRESTED MERGANSER.

THIRD SPECIES.

Mergus Albellus. Linn. and Gmel.

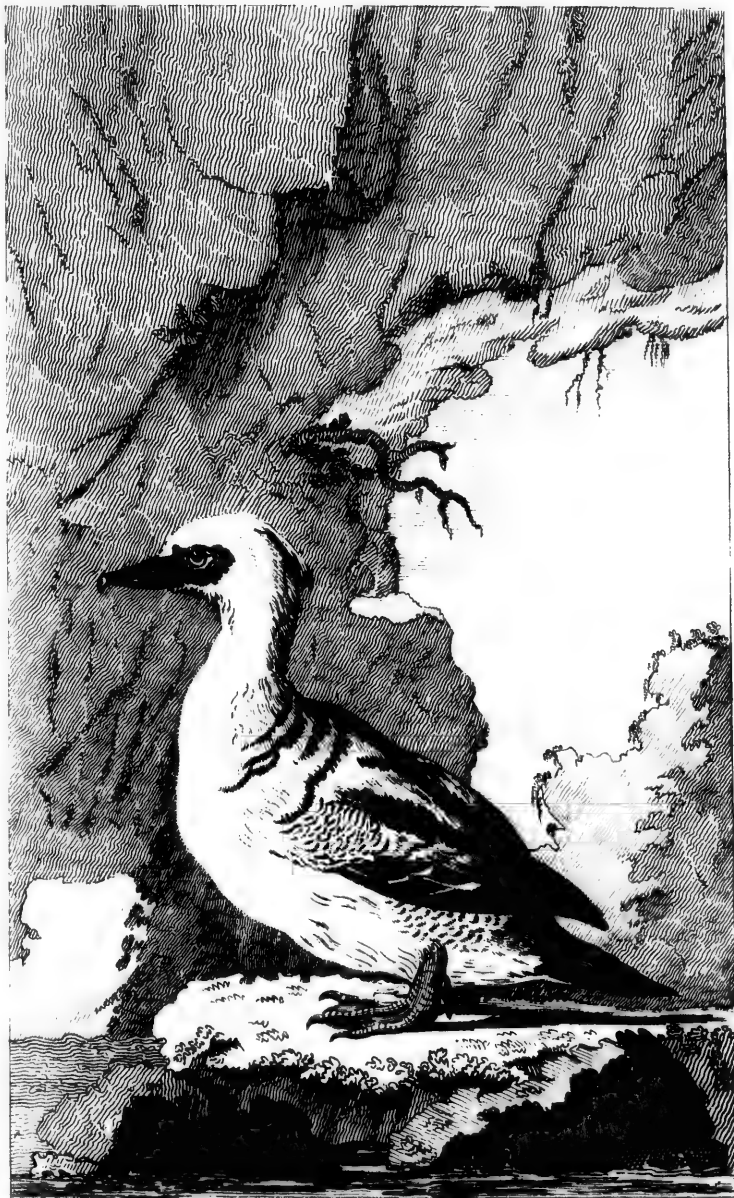
Mergus Varius. Gefner.

Mergus Rheni. Aldrov. Ray, &c.

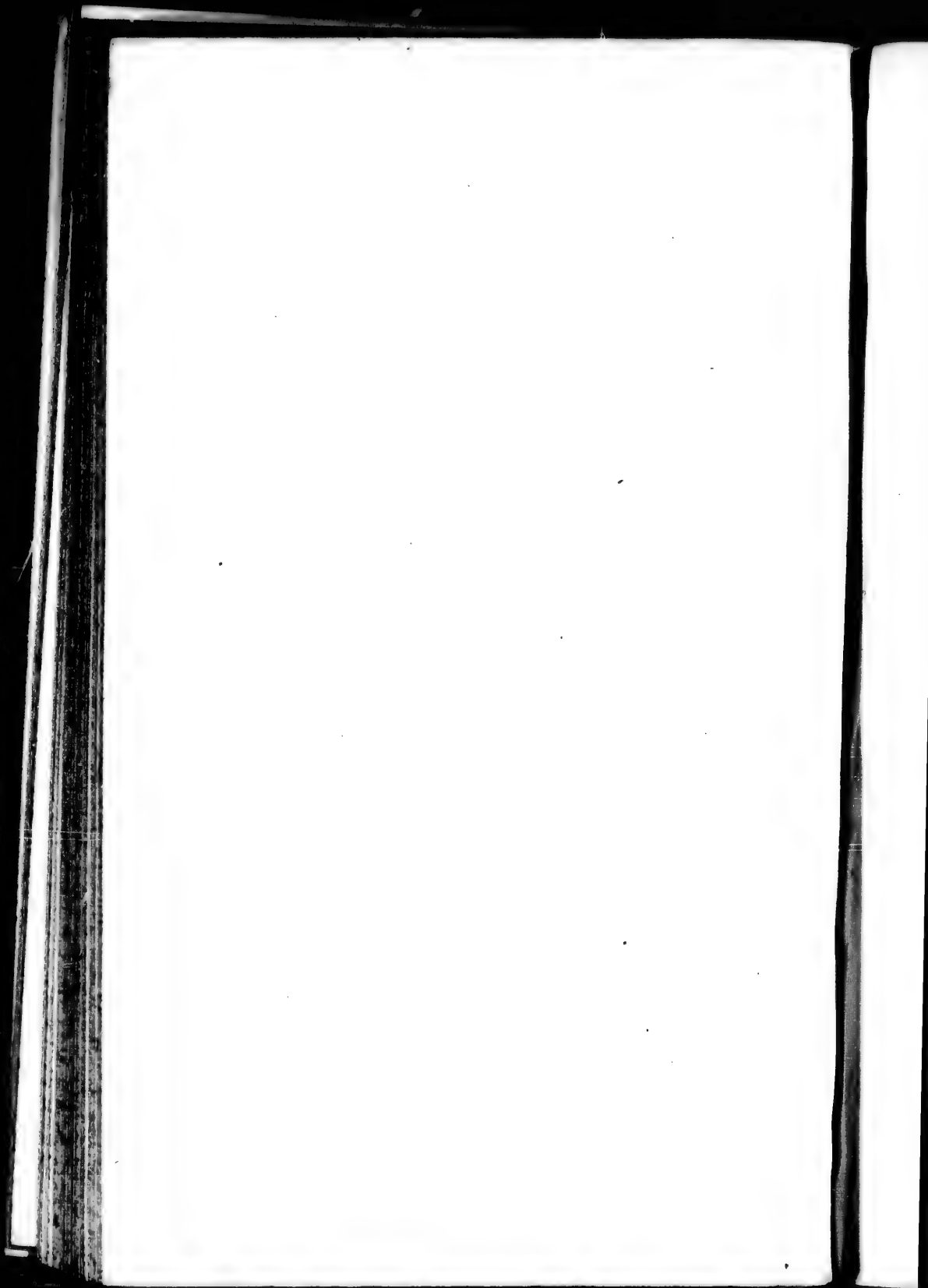
The Sniew, or White Nun. Penn. and Lath.

THIS is a handsome little Merganser with a pied plumage: it is sometimes called the *Nun* (*Religieuse*) no doubt because of the neatness of its fine white robe, its black mantle, its head hooded with white unwebbed feathers, disposed like a chin-piece, and raised in the form of a band, which intersects behind a little veil lappet of a dull green-violet: a black half collar on the top of the neck compleats the modest and elegant apparel of this little winged Nun. It is also well known by the denomination *Piette** on the rivers Are and Somme in Picardy, where is not a peasant, says Belon, but knows its name. It is rather larger than the

* From *pietter*, to trip lightly.



THE SMEW MERGANSER.



garganey, but smaller than the morillon; its bill is black, and its feet of a lead gray: the extent of black and white on its plumage is very subject to vary, inasmuch that it is sometimes almost all white. The female is not so beautiful as the male; it has no crest; its head is rufous, and its mantle is gray.

[A] Specific character of the Smew, *Mergus-Albellus*: "Its crest is hanging; the back of its head black; its body white; its back and temples black; its wings variegated."

The MANTLED MERGANSER.

FOURTH SPECIES.

<i>Mergus Serrator</i> , var. 1.	Gmel.	
<i>Mergus Niger</i> .	Gesner and Johnston.	
<i>Merganser Leucomelanus</i> .	} Briffon.	
<i>Merganser Niger</i> .		
<i>Anas Longirostra</i> <i>tertia</i> .	} Schwenckfeld.	
<i>sexta</i> .		

WE rank these birds together, because they differ less than the male and female in this genus; especially as they are nearly of the same size. Belon, who has described one under the name of *tiers* (*third*) says that it was so called as being intermediate, or *the third between the duck and the morillon*, and that its wings imitate, by their motley colours, the variety of the morillon's

millon's wings: he was mistaken however in joining his *tiers* with this bird, since its bill is entirely different from that of the morillon; and its bulk approaches more to that of the duck. This description exactly suits then the *Mergus Leucomelanus* (*black and white merganser*) of Brisson; it also agrees with his *Mergus Niger*, (or *black merganser*) except that the neck of this last has a bay cast, and that its tail is black: the bill and feet of both are red. Schwenckfeld says, that the former are seldom seen in Silesia; but he does not by that expression insinuate that the latter is more common there, while he remarks that some of these appear on the rivers in March on the breaking up of the ice.

The STELLATED MERGANSER.

LE HARLE ETOILE', *Buff*.

FIFTH SPECIES.

Mergus Minutus. Linn.

Merganser Stellatus. Briss. and Klein.

Mergus Albus. Gefner and Johnston.

Mergus Glacialis. Aldrov. Will. and Charl.

The Weasel Coot. Albin.

The Minute Lough Diver. Penn.

THE great difference between the male and female in this genus occasions much confusion in the nomenclature: and we strongly suspect

suspect that if the Stellated Merganser were better described and better known, it would be found to be the female of some of the foregoing species. Willughby was of this opinion, and regarded it as the female of the mantled Merganser; and indeed it has the peculiar property of that bird, being found sometimes entirely white. Brisson gives it the epithet *stellated*, from a white spot, figured like a star, which is placed, he says, below a black spot that surrounds the eyes. The upper side of the head is bay colour, the mantle blackish brown, all the fore side of the body is white, and the wing is partly white, partly black; the bill is black, or lead-coloured, as in the mantled Merganser; and these two birds are nearly of the same size. Gefner says, that this Merganser is called in Switzerland the *Ice Duck*, because it does not appear on the lakes till hard frost sets in.

[A] Specific character of the *Mergus Minutus*: "Its head is smooth and gray, a black bar on its eye, a white spot under the eye." In winter, these birds visit the shores of our island, from the northern regions.

The CROWNED MER- GANSER.

SIXTH SPECIES.

Mergus Cucullatus. Linn. and Gmel.

Merganser Virginianus Cristatus. Briss.

Serrator Cucullatus. Klein.

The Wind-Bird. Will.

The Round-crested Duck. Catesby and Edw.

The Hooded Merganser. Penn. and Lath.

THIS Merganser, which is found in Virginia, is very remarkable for a fine edged crown on its head, black in the circumference, and white in the middle, formed of feathers elevated to a disk; which has a fine effect, but appears to advantage only in the living bird. Its breast and belly are white; the bill, the face, the neck, and the back, are black; the quills of the tail and wings are brown; the innermost in the wings are black, and marked with a white streak. This bird is nearly as large as a duck: the female is entirely brown, and its crest is smaller than that of the male. Fernandez has described both under the Mexican name *Ecatototl*, with the epithet *wind-bird*, without mentioning the reason. These birds are found in Mexico and Carolina, as well as in Virginia, and haunt the rivers and pools.

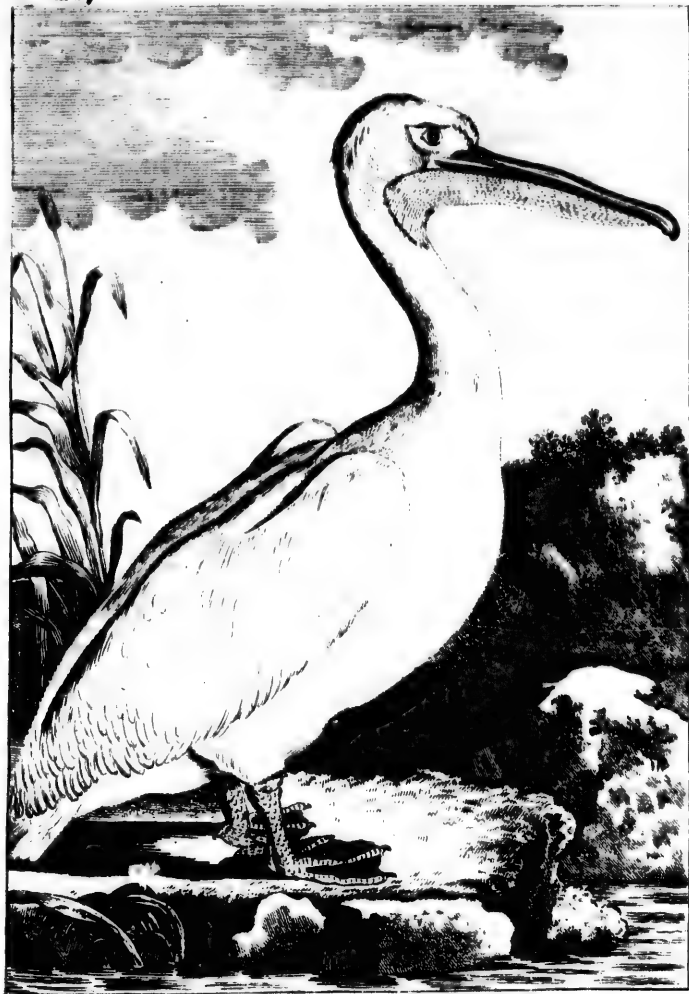
[A] Specific character of the *Mergus Cucullatus*: "Its crest is ball-shaped and white on both sides; its body brown above, and white below." It winters in Virginia and Carolina.

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N^o 217



THE GREAT WHITE PELICAN.

The PELICAN.

LE PELICAN. *Buff.*

Pelecanus Onocrotalus. Linn. and Gmel.

Onocrotalus. Gesner. Aldrov. Will. Johnst. Briss. &c.

The White Pelican. Edw. Penn. and Lath.

THE Pelican* is more interesting to the naturalist by its greater stature and the large sac under its bill, than by the fabulous celebrity of its name, sacred among the religious emblems of ignorant nations. It has been employed to re-

* In Greek Πελικανος, Πελεκινος, Πελεχινος, in different authors, from Πελικυς, a hatchet, on account of its broad bill: it had also the name Ονοκροτάλος, from ονος an ass, and κροτολον a rattle, because of the gurgling in its throat. The Romans adopted that term; but, according to Verrius Flaccus and Festus, they anciently called it *Truo*. In Hebrew it was denominated *Kakik*: in Chaldean *Caiba*: in Arabic *Kuk* and *Albausal*, meaning *gullet*: in Persian *Kik Tacab*, (which signifies *water-carrier*) or *Miso* (*sheep*, on account of its bulk): in Egyptian *Begas* or *Gemel-el bahr* (*water camel*): in Turkish *Sackagusch*: in the old Vandal language *Bukriez*: in Spanish *Groto*: in Italian *Agrotto*: at Rome *Truo*; and near Sienna and Mantua *Agrotti*: in the Alps of Savoy *Gottreufe*, because its bag resembles the *guitres* to which the mountaineers are subject: in German *Meergans*, *Schnee-gans* (*sea-goose*, *snow-goose*): in Austria *Obne-Vogel* (the *awme*, or *tierce-bird*): in Polish *Bak*, *Bak Cudzoziemski*: in Russia *Baba*: in modern Greek *Toubano*: in the French West India islands *Grand Gosier* (*great gullet*): in Mexico *Atototl*; and by the Spanish settlers *Alcatraz*: in the Philippine islands *Pagala*: by the negroes of Guinea *Pokto*: by the Siamese *Noktho*: in old French *Liuvans*.

present maternal tenderness, tearing its breast to nourish its languishing family with its blood. This tale, which the Egyptians had before related of the vulture *, cannot apply to the Pelican, which lives in abundance †, and even enjoys an advantage over the other piscivorous birds, being provided with a bag for storing its provisions.

The Pelican equals, or even surpasses, the bulk of the swan ‡, and would be the largest of all the aquatic birds §, were not the albatross thicker, and the flamingo much taller on its legs. Those of the Pelican, on the contrary, are very low; but its wings are so broad as to extend eleven or twelve feet ||. It therefore supports itself easily, and for a length of time, in the air: it balances itself with alertness, and never changes its place but to dart directly downwards on its prey, which cannot escape; for the violence of the

* Horus Apollo.

† St. Augustine and St. Jerome seem to be the authors of the application of this fable, originally Egyptian, to the Pelican.

‡ Edwards reckons the one which he describes twice as large as the swan. Ellis speaks of one more than double the bulk of a large swan.

§ " I sat out on the second of October for the island of Griel by this channel, which is parallel to the main branch of the Niger . . . it was entirely covered with Pelicans, which were sailing gravely like swans on the water; they are indisputably, after the ostrich, the largest birds of the country." Adanson, *Voyage au Senegal*, p. 136.

|| The Pelicans described by the academicians had eleven feet of alar extent, which, as they remark, is double that of the swans and of the eagles.

dash,

dash, and its wide-spread wings, which strike and cover the surface of the water, make it boil and whirl *, and at the same time stun the fish, and deprive it of the power of flight †. Such is their mode of fishing when alone; but in large flocks they vary their manœuvres, and act in concert: they range themselves in a line, and swim in company, forming a large circle, which they contract by degrees to inclose the fishes ‡, and they share the capture at their convenience.

These birds spend in fishing the hours of the morning and evening, when the finny tribe are most in motion; and chuse the places where they are most plentiful. It is amusing to behold them sweeping the water, rising a few fathoms above it, falling with their neck extended and their sac half full; then ascending with effort to drop again §, and continuing this exertion till their wide bag is entirely filled. Now they retire to eat, and digest at leisure on some cliffs, where they remain tranquil and drowsy till evening ||.

It appears to me, that this instinct of the Pelican, of not swallowing its prey at first, but collecting a provision, might be turned to account; and that, like the cormorant, it might be

* *Petr. Martyr. Nov. Orb. decad. i. lib. 6.*

† Labat and Dutertre.

‡ Adanson, *Voyage au Senegal*, p. 136.

§ Nieremberg, *Hist. Nat. lib. x. p. 223.*

|| Labat and Dutertre.

made a domestic fisher: indeed travellers affirm, that the Chinese have actually succeeded *. Labat relates, that the savages trained a Pelican, which they dispatched in the morning, after having stained it red with *rocou* †, and that it returned in the evening to their hut with its sac full of fish, which they made it to disgorge.

This bird must be an excellent swimmer; its feet are completely webbed, its four toes being connected by a single piece of membrane: this skin and the feet are red or yellow, according to the age ‡: and it seems, as the Pelican grows old, to assume that fine, soft, and almost transparent rosy tint, which gives its white plumage the lustre of a varnish.

The feathers on its neck are only a short down; those on the nape are longer, and form a sort of tuft; its head is flat at the sides; its eyes are small, and placed in two broad naked cheeks; its tail is composed of eighteen quills; the colours of its bill are yellow and pale orange on a gray ground, with streaks of bright red on the middle and near the extremity; this bill is flattened above like a broad blade, with a longi-

* See Voyage de Pirard, *Paris*, 1619. tom. i. p. 376. But Pirard is mistaken when he thinks that this bird is peculiar to China.

† Probably the same with the *puccoon*, employed by the Indians to heighten their copper complexion, and held in great estimation among them. It is the root of the *Sanguinaria Canadensis*, a low herbaceous plant, which bears a fine white flower in the spring, and is scattered profusely in the American forests.—T.

‡ Aldrovandus.

tudinal ridge, terminating in a hook; the inside of this blade, which makes the upper mandible, has five protuberant wrinkles, of which the two outer form the cutting edges; the lower mandible consists only of two flexible branches, which accommodate themselves to the extension of the membranous pouch attached to them, and which hangs below as a sac in fashion of a bow-net. This pouch can hold more than twenty quarts of liquid*: it is so wide and so long, that a person may put his foot in it †, or thrust his arm as far as the elbow ‡. Ellis says, that he has seen a man cover his head with it §; which will not, however, make us credit what Sanctius || says, that one of these birds dropt in the air a negro child, which it had carried up in its sac.

This large bird appears susceptible of some education, and even of a certain cheerfulness, notwithstanding its weight ¶. It has nothing fa-

* "The length of the bill of the Pelican which I measured was more than a foot and half, and its sac contained near twenty-two pints of water." (Equal to forty-four English wine pints. T.) Adanson, *Voyage au Senegal*, p. 136.

† Belon.

‡ Gefner.

§ This is commonly exhibited by the keepers of wild beasts in London.—T.

|| In Aldrovandus, tom. iii. p. 50.

¶ Belon.—"It was diverting to see, when we set upon it the boys or our dogs, how admirably it defended itself, rushing with impetuosity on its antagonists, and striking them neatly with its bill, which they equally repaid; so that it looked as if they were beating two sticks against each other, or playing with clatter-bones." *Voyage en Guinée, par Guillaume Bosman, Utrecht, 1705. Lettre xv.*

vage, but soon becomes familiar with man *. Belon saw one in the isle of Rhodes, which walked freely through the town; and Culmann, in Gefner, relates the noted story of the Pelican which followed the emperor Maximilian, flying over the head of his army when on a march, and rising sometimes so high as to seem like a swallow, though it measured fifteen Rhenish feet across the wings.

This vast power of flight would be astonishing in a bird that weighs twenty-four or twenty-five pounds, were it not wonderfully assisted by the great quantity of air with which its body is inflated, and also by the lightness of its skeleton, which exceeds not a pound and half; its bones are so thin, that they are somewhat transparent, and Aldrovandus asserts that they have no marrow. It is no doubt owing to the nature of these solid parts, which are slow in ossifying, that the Pelican enjoys its great longevity †; even in captivity it has been observed to live longer than most other birds ‡.

* Rzaczynski speaks of a pelican kept fourteen years at the court of Bavaria, which was very fond of company, and seemed to take singular pleasure in hearing music. *Auduar.* p. 399.

† Turner speaks of a tame Pelican that lived fifty years. The one mentioned by Culmann attained the age of fourscore; and in its latter years it was maintained by order of the emperor, at the expence of four crowns a day.

‡ Of a great number of Pelicans kept in the menagerie at Versailles, none have died in the space of twelve years; yet during that time some of every other species of animal has died. *Memoires de l'Academie des Sciences*, p. 191.

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The Pelican, though not entirely foreign, is very rare in our climates, especially in the interior provinces. We have in our cabinet the bodies of two which were killed, the one in Dauphiné, and the other on the Saone*. Gesner speaks of one that was taken on the lake of Zurich, and was regarded as an unknown bird†. It is not common in the north of Germany‡, though great numbers occur in the southern provinces watered by the Danube§: this noble river was an ancient haunt of these birds; for Aristotle, ranging the Pelicans with some gregarious kinds, the crane and the swan, says, that they depart from the Strymon, and waiting for each other at the passage of the mountains, they all alight together, and nestle on the banks of the Danube||. These streams, therefore, seem to bound the countries where their flocks advance from north to south in our continent: and Pliny must have been ignorant of this route, when he represented them as coming from the northern extremity of Gaul¶: for they are strangers there, and still more in Sweden and the arctic tracts, at least if we judge from the silence of their naturalists**;

* M. de Piolenc sent us one which he had killed in a marsh near Arles, and M. Lottinger another from a pool between Dieuze and Sarreburg.

† Aldrovandus, *tom. iii. p. 51.*

‡ Schwenckfeld relates, that one was caught in 1585, at Breslaw.

§ Rzaczynski.

|| Hist. Animal. *lib. viii. 12.*

¶ Hist. Nat. *lib. x.*

** Linnæus, Muller, Brunnich.

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the account which Olaus Magnus gives of the ancient *onocrotalus* being only an ill-digested compilation. Nor does it seem to frequent England, since the authors of the British Zoology do not insert it in their work; and Charle-ton relates, that in his time there were Pelicans in Windsor Park, which had been sent from Russia. In fact, they are found, and even pretty often, in Red Russia, and in Lithuania, as well as in Volhinia, in Podolia, and in Pokutia, as Rzaczynski testifies: but they extend not to the most northern parts of Muscovy, as Ellis pretends. In general, these birds seem to affect more the warm than the cold climates. One of the largest size, weighing twenty-five pounds, was killed in the island of Majorca, near the bay of Alcudia, in June 1773*. They appear regularly every year on the lakes of Mantua and Orbitello; and from a passage of Martial we may infer that they were common in the territory of Ravenna†. They are found also in Asia Minor‡, in Greece§, and in many parts of the

* *Journal Historique & Politique*, 20 Juillet 1773.

† *Turpe Ravennatis guttur onocrotali.*

‡ "Onocrotales feed in a lake which is above the city of Antioch." *Belon.*

§ "We killed with stones (near Patras) one of those large birds which we call *pelicans*, the Latins *onocrotali*, and the modern Greeks *taubano*. I know not whether the cold hindered it from rising: it had a pouch under its bill, into which we poured more than fifteen quarts of water. The Greeks say that it carries water to the mountains for its young. It is very common in those parts, as
" well

the Mediterranean and the Propontis. Belon even observed at sea their passage between Rhodes and Alexandria; they flew in bodies from north to south, shaping their course towards Egypt: and the same traveller enjoyed a second time this sight, near the confines of Arabia and Palestine. Lastly, voyagers tell us, that the lakes of Judea and of Egypt, the banks of the Nile in winter, and those of the Strymon in summer, seen from the heights, appear whitened by the multitude of Pelicans which cover them.

When we collect the testimonies of the various navigators, we see that the Pelicans inhabit all the southern countries of our continent, and that they occur, with little difference, and in still greater numbers, in the corresponding parallels in the new world. They are very common in Africa, on the sides of the Senegal, and of the Gambia, where the negroes call them *pokko* *: the great tongue of land, which bars the mouth of the first of these rivers, is filled with them †. They are found likewise at Loango, and on the coasts of Angola ‡, of Sierra Leona §, and of Guinea||: on the bay of Saldana they are intermingled

"well as on the coast of Smyrna." *Wheeler and Spon's Travels into Dalmatia.*

* Moore; *Hist. Gen. des Voy. tom. iii. p. 304.*—Voyage de le Maire aux Canaries, *Paris, 1695, p. 104.*

† Brue; *Hist. Gen. des Voy. tom. ii. p. 488.*

‡ Pigafetta.

§ Finch; *Hist. Gen. des Voy. tom. iii. p. 226.*

|| Voyage de Degenes, *Paris, 1698, p. 41.*

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with

with a multitude of birds, which seem, on that shore, to fill the air and the sea *. They occur at Madagascar †, at Siam ‡, in China §, at the isles of Sunda ||, and at the Philippines ¶, especially on the fisheries of the great lake of Manilla **. They are sometimes met with at sea ††: And lastly, they have been seen on the remote lands in the Indian ocean, as at New Holland ‡‡, where Captain Cook says they are extremely large.

In America, the Pelicans are found from the Antilles §§ and *Terra Firma* ||||, the isthmus of Panama ¶¶, and the bay of Campeachy ***, as far as Louisiana †††, and the country adjoining to

* Downton; *Hist. Gen. des Voy. tom. ii. p. 46.*

† Cauche; *Paris 1651, p. 136.*

‡ Tachard; *Hist. Gen. des Voy. tom. ix. p. 311.*

§ Pirard.

|| Pison.

¶ Philosophical Transactions, N° 285.

** Sonnerat.

†† "On the 13th of December, after having passed the Tropic, many birds visited us; there were a great number of Pelicans (*grand gofiers*)." *Voyage de le Guat, Amsterdam, 1708, tom. i. p. 97.*

‡‡ *Hist. Gen. des Voy. tom. xi. p. 221.*

§§ Dutertre, Labat, Sloane. "In 1656, in the month of September, there was a great mortality among these birds, particularly the young ones; for all the coasts of the islands of St. Aloufia, of St. Vincent, of Becouya, and of all the Grenadines, were strewed with the dead carcases." Dutertre, *Hist. Gen. des Antilles, tom. ii. p. 271.*

|||| Oviedo.

¶¶ Wafer.

*** Dampier.

††† *Hist. Gen. des Voy. tom. xiv. p. 456.*

Hudson's Bay *. They are seen also on the inhabited isles and inlets near St. Domingo †; and in greater numbers on those small isles clothed with the finest verdure, which lie in the vicinity of Guadaloupe, and which seem to be occupied as the retreat of different species of birds: one of these isles has even been called *the isle of Pelicans* (*l'île aux grand-gosiers* ‡). They augment also the flocks of birds which inhabit the island of *Aves* §: the coast of the Sambales, which abounds with fish, attracts them in great numbers ||: in that of Panama, they are seen to alight in bodies on the banks of pilchards left at spring tides: And lastly, all the shoals and adjacent islets are to such a degree covered with these birds, that their fat is melted for oil ¶.

The Pelican fishes in fresh water as well as in the sea. We need not, therefore, be surprized to find it on the large rivers; but, what is singular, it does not confine itself to the contiguous, low, and wet grounds, but it frequents also the driest countries, such as Arabia and Persia **, where it is stiled *water-carrier* ††. As it is obliged to place its nest remote from the fountains or wells where the caravans halt, it has been observed to carry fresh water in its pouch from a great distance to its young: and the good

* *Hist. Gen. des Voy. tom. xiv. p. 456.*

† Note communicated by the Chevalier Deshayes.

‡ Dutertre.

§ Labat.

|| Wafer.

¶ Oviêdo.

** Chardin.

†† Tacab.

Mussulmans

Mussulmans say, very piously, that God ordained this bird to inhabit the desert, in order to provide drink for the parched pilgrims who journey towards Mecca, as in ancient times he sent the raven to feed Elias in the wilderness *. Hence the Egyptians, alluding to the manner in which this large bird keeps the water in its bag, have stiled it the *river camel* †.

We must not confound the *Barbary Pelican*, mentioned by Dr. Shaw, with the real Pelican, since this traveller says that it is not larger than a lapwing. The Pelican of Kolben is only the spoon-bill. Pigafetta distinguished well the Pelican on the coast of Angola, but was mistaken in bestowing that name on a bird of Loango with tall legs like the heron ‡. We doubt much also whether the *alcatraz*, which some travellers say that they have seen in the open sea between Africa and America §, be our Pelican; though the Spanish inhabitants of the Philippines and of Mexico have given it that appellation: for the Pelican strays little from the coasts, and when met with at sea it is regarded as a sign of the proximity of land ||.

Of the two names *pelecanus* ¶ and *onocrotalus* **,

* Chardin.

† *Gemel el Babr*. Vansleb. *Voyage en Egypte, Paris, 1677.*

‡ *Hist. Gen. des Voy.* tom. iv. p. 588.

§ *Id.* tom. i. p. 448.

|| Sloane.

¶ Aristotle, *lib.* ix. 10.

** Pliny, *lib.* x. 47.

applied

applied by the ancients to this large bird, the latter refers to its strange voice, which they compared to the braying of an ass. Klein supposes that it makes this noise with its throat plunged in the water; but this idea seems to be borrowed from the bittern, for the Pelican utters its raucous cry far from the water, and screams loudest in open air. Ælian describes and accurately characterizes the Pelican under the name of Κηλη*; but I cannot imagine why he represents it as an Indian bird, since it is found now, and undoubtedly was found formerly, in Greece.

The first name *pelecanus* or *pelicanus* has misled the translators of Aristotle, and even Cicero and Pliny: they have rendered it by the word *platea*, which would confound the *Pelican* with the *spoon-bill*. When Aristotle says that the *pelecanus* swallows thin shell-fish and casts them up half-digested, in order to separate the meat which they contain, he imputes to it a habit which agrees better with the spoon-bill, considering the structure of its *œsophagus*: for the pouch of the Pelican is not a stomach where digestion is begun; and Pliny inaccurately compared the manner in which the *onocrotalus* swallows and brings up its food to the process carried on in ruminating animals. "There is nothing here," M. Perrault very judiciously

* This word signified any tumor, but more particularly a swelling on the throat.

remarks,

remarks, "but what enters into the general plan
 "of the organization of birds: all of them have
 "a craw in which their food is lodged; in the
 "Pelican it lies without and under the bill, in-
 "stead of being concealed within, and placed at
 "the bottom of the *œsophagus*. But this exte-
 "rior craw has not the digestive heat of that of
 "other birds, and in this bag the Pelican car-
 "ries the fish entire to its young. To disgorge
 "them it presses the pouch against its breast;
 "and this very natural act may have given rise
 "to the fable so generally told, that the Pelican
 "opens its breast to nourish its offspring with
 "its blood."

The nest of the Pelican is commonly found at
 the verge of waters; it places it flat on the
 ground*; and Salerne was mistaken, confound-

* Belon, Sonnerat, and others.—"They lay on the bare ground,
 "and cover their eggs in this situation. . . . I have found five
 "under a female, which did not give herself the trouble to rise
 "and let me pass; she only made some pecks with her bill, and
 "screamed when I struck her to drive her from her eggs. . . . There
 "was a number of young ones on our islet. . . . I took two young
 "ones, which I fastened to a stake, and I had the pleasure, for
 "some days, of seeing the mother, which fed them and remained
 "the whole of the day with them, passing the night on a tree
 "above their heads; all the three were grown so familiar that they
 "allowed me to touch them, and the young ones took very graci-
 "ously the little fish which I offered them, and which they put first
 "into their pouch. I believe that I should have brought them
 "away, if their dirtiness had not hindered me: they are filthier than
 "geese or ducks; and we may say that their life is divided into
 "three acts, to seek food, to sleep, and to eject every minute heaps
 "of excrements as large as one's hand." Labat, *Nouveau Voyage*
aux îles de l'Amerique, tom. viii. pp. 294, 296.

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ing it probably with the spoon-bill, when he said that it breeds on trees. It is true that it perches on these, notwithstanding its weight and its broad webbed feet; and this habit, which would be less surprizing in those of America, where many aquatic birds perch, obtains equally in the Pelicans of Africa and of other parts of our continent *.

This bird, as voracious as it is destructive †, takes up in a single excursion as many fish as would feast half a dozen men. It swallows easily a fish of seven or eight pounds: and we are told that it also eats rats and other small animals ‡. Pison says, that he saw a kitten swallowed alive by a Pelican, which was so familiar that it walked into the market; where the fishermen hastened to tie its bag, lest it should slyly purloin some of their fish.

It eats with the side of its mouth, and when a person throws it a morsel, it snaps at it. The pouch in which it stores all its captures, consists

* "They are seen (in Guinea) to perch by the river side on some tree, where they wait to shoot upon the fish which appear on the surface." *Voyage de Gennes au Detroit de Magellan, Paris, 1698, p. 41.* "We saw those large birds called pelicans perch upon trees, though they have feet like a goose. . . . Their eggs are as large as a halfpenny roll." *Voyage à Madagascar, par Fr. Cauche, p. 1361.*

† *Inexplebile animal*, says Pliny.

‡ "It is exceedingly fond of rats, and swallows them entire. . . . sometimes we made it come near us, and as if it wished to amuse us, it brought up a rat from its crop, and threw it at our feet." Bosman, *Voyage en Guinée, Lettre xv.*

of two skins ; the inner coat is continued from the membrane of the *œsophagus*, the outer is only a production of the skin of the neck : the wrinkles in which it is folded serve to contract the bag, and when empty it becomes flaccid. The bag of the Pelican is used as a tobacco-pouch, and, in the French West India islands is termed *blague* or *blade* *, from the English word *bladder*. It is asserted, that when these are prepared, they are more beautiful and softer than lamb-skins †. Some sailors make caps of them ‡ ; the Siamese form musical strings of the substance § ; and the fishermen of the Nile use the sac attached to the jaw as a scoop for lading their boats, or for holding water ; as it neither rots with moisture nor can be penetrated by it ||.

* *Blagues* are prepared by rubbing them well between the hands, to soften the skin ; and to increase the pliancy, they are besmeared with the butter of the cocoa, and again passed between the hands, care being taken to preserve the part which is covered with feathers as an ornament. *Note communicated by the Chevalier Deshayes.*—

“ The sailors kill the Pelican for its bag, into which they put a cannon-ball, and then hang it up, to give it the shape of a tobacco-pouch.” *Le Page du Pratz, Histoire de la Louisiane, tom. ii. p. 113.*

† “ Our people killed many, not to eat . . . but to have their *blagues* ; for this is the name given to the pouch where they store their fish. All our smokers use them to hold their cut tobacco. . . . They are passed for lamb-skins, and they are much finer and softer ; they become of the thickness of good parchment, but extremely pliant and soft. The Spanish women hem them very prettily and delicately with gold and silk ; I have seen some pieces of work of this kind that were exceedingly beautiful.” *Labat, tom. viii. p. 299.*

‡ *Cauche.*

§ *Tachard.*

|| *Belon.*

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It seems that nature has provided with singular caution against the suffocation of the Pelican: when, to swallow its prey, it opens under water its whole bag, the *trachea arteria*, then leaving the *vertebræ* of the neck, adheres under this bag, and occasions a very sensible swelling; at the same time two sphincter muscles contract the *æsophagus* in such manner as to completely prevent the water from entering*. At the bottom of this same bag is concealed a tongue so short, that the bird has been believed to have none†; the nostrils also are almost invisible, and placed at the root of the bill; the heart is very large; the kidney very small; the *cæca* equally small, and much less in proportion than in the goose, the duck, and the swan: Lastly, Aldrovandus assures us, that the Pelican has only twelve ribs; and he observes that a strong membrane, furnished with thick muscles, covers the pinions.

But a very interesting observation we owe to M. Mery and Father Tachard‡, that air is spread

* *Memoires de l'Academie des Sciences*, p. 196.

† Gesner.

‡ "In a journey which we made to the loadstone-mine, M. de la Marre wounded one of these large birds which our people call *grand gosier*, and the Siameze *woktho* . . . its spread wings measured seven feet and a half. . . In dissection we found, under the fleshy panicle, very delicate membranes which enveloped the whole body, which folding differently, formed many considerable sinuses, particularly between the thighs and the belly, between the wings and the ribs, and under the claw; some were

spread under the skin through the whole body of the Pelican. It may even be said that this is a general fact, more conspicuous indeed in the case of the Pelican, but which obtains in all birds, and which M. Lory, a celebrated and learned physician at Paris, has demonstrated by tracing the communication from the atmosphere to the bones and the pipes of the quills. In the Pelican, the air passes from the breast into the axillary sinuses, whence it insinuates into the vesicles of the thick and swelled cellular membrane which covers the muscles and envelopes the whole body, under the membrane in which the feathers are rooted; these vesicles are inflated to such a degree, that on pressing the body, the air is observed to escape every way under the fingers. During expiration, the air compressed in the breast passes into the sinuses, and thence spreads into all the vesicles of the cellular texture: by blowing into the *trachea arteria*, we may even make the course of the air sensible to the eye. We may conceive therefore how

“ so wide as to admit the two fingers; these great sinuses divided
 “ into many little ducts, which by perpetual subdivision ran into
 “ an endless multitude of ramifications, which were perceptible only
 “ by the bubbles of air which inflated them; infomuch that, pressing the body of this bird, one heard a little noise like that produced by pressing the membranous parts of an animal which has
 “ been inflated. By the assistance of the probe and blowing, we
 “ discovered the communication of these membranes with the
 “ lungs.” *Second Voyage of Father Tachard; Hist. Gén. des Voy.*
tom. ix. p. 311.

much

much the Pelican may enlarge its volume without increasing its weight, and how much this must facilitate the flight of this great bird.

The flesh of the Pelican needed not to have been forbidden among the Jews as unclean; for it condemns itself by its bad taste, its marshy smell, and its oily fat, though some navigators have eaten of it*.

* "Their flesh is better than that of boobies or man of war birds."—*Dampier*.

[A] Specific character of the Pelican, *Pelecanus-Onocrotalus*:
"It is white, and its throat furnished with a pouch."

VARIETIES of the PELICAN.

WE have observed in many articles of this Natural History, that in general the species of the large birds, like those of the large quadrupeds, exist single, detached, and almost without varieties; that they also appear everywhere the same; whereas under each genus or in each family of small animals, and especially in those of the little birds, there is a multitude of breeds more or less akin to the parent stock, and which have improperly been denominated *species*. That term, and the metaphysical notion which it involves, often withdraws us from

the true knowledge of the shades of nature in her productions, much more than the names of *varieties*, of *breeds*, and of *families*. But this lineage, which is lost amidst the collateral branches in the small species, maintains itself among the large ones; for they admit of few varieties only, which may always be easily referred to their primary trunk. The ostrich, the cassowary, the condor, the swan, all the birds of the first magnitude, have few or no varieties in their species. Those which may be reckoned the second order in bulk or strength, such as the crane, the stork, the pelican, the albatross, admit of only a small number of these varieties, which in the Pelican may be reduced to two.

The BROWN PELICAN.

FIRST VARIETY.

Pelecanus Fuscus. Linn. and Gmel.

Onocrotalus Fuscus. Briss.

The Pelican of America. Ellis and Edwards.

The Dusky Pelican. Pennant.

WE have already remarked, that the plumage of the Pelican is subject to vary, and that, according to the age, it is more or less white and

and tinged with a little rose-colour : it seems to vary also from circumstances, for it is sometimes mixed with gray and black. These differences have been remarked between individuals [which undoubtedly belonged to the same species *]. But these intermingled colours are so little removed from a general gray or brown cast, that Klein has not hesitated to assert positively that the brown and white pelicans are only varieties of the same species. Sir Hans Sloane, who had carefully observed the Brown Pelicans of America, confesses also that they appeared to be the same with the white pelicans. Oviedo, speaking of the pelicans with a cinereous plumage which occur on the rivers of the Antilles, remarks, that some of them are of a very fine white †. We are inclined to think that the brown colour is the garb of the young ones ; for the Brown Pelicans have generally been found to be smaller than the white. Those seen near Hudson's Bay were also smaller and of a dusky cast ‡ ; so that their white is not occasioned by the severity of the climate. The

* " Some had their plumage entirely white, with the light and transparent cast of flesh-colour, except the wings, whose great quills had a tinge of gray and black ; the others were of a much more decided flesh or rose-colour." *Memoires de l'Academie des Sciences, &c.* The Pelican killed on the lake of Albufera had its back of a blackish gray. *Journal Politique, &c.*

† Hist. Gen. des Voy. tom. xiii. p. 228.

‡ Ellis, and l'Hist. Gen. des Voy. tom. xiv. p. 663 ; and tom. xv. p. 268.

same variety of colour is observed in the hot countries of the ancient continent. Sonnerat, after having described two pelicans of the Philippine islands, the one brown and the other rose-colour, expresses a suspicion, as we do, that he had only viewed the same bird at different ages. And what confirms our opinion, Brisson has given a Philippine pelican, which seems to form the intermediate shade, being not entirely gray or brown, but having only the wings and part of the back of that colour, and the rest white *.

* " Above gray cinereous, below white, the rump of the same colour; the head and neck bright whitish, with a longitudinal bar on the upper part of the neck, variegated with brown and whitish; the greater wing-quills cinereous blackish, the tail-quills cinereous white, their shafts blackish, the lateral ones bright white at their origin."

[A] Specific character of the *Pelecanus Fuscus*: " It is ash-brown, its primary wing-quills black, its throat furnished with a pouch."

The INDENTED-BILLED PELICAN.

SECOND VARIETY.

Pelicanus-Thagus. Gmel.

Onocrotalus Rostra Denticulato. Briss.

Onocrotalus Mexicanus Dentatus. Hernandez, &c.

*The Saw-billed Pelican**, Lath.

IF the indenting of the bill of this Mexican Pelican be natural and regular, like that of the bill of the merganser and some other birds, this particular character would suffice to constitute a different species, though Brissou gives it only as a variety: but if this indenting be formed by the accidental chipping of the edges of the bill, as we have remarked in the bill of certain calaas, the accidental difference deserves not even to be admitted as a variety; and we lean more to this opinion, as Hernandez mentions the common pelican and the Indented-billed Pelican as inhabiting the same places.

* *Atototl, Alcatraz, Onocrotalus Mexicanus Dentatus.* Hernandez.—
Atototl, Fernandez.

The CORMORANT.

LE CORMORAN. *Buff.*

Pelecanus-Carbo. Linn. and Gmel.

Phalacrocorax. Gesner and Brisson.

Morsus. Gesn. and Aldrov.

Carbo Aquaticus. Gesner.

Corvus Aquaticus. Gesner. Aldrov. Johnst. &c. *

THE name of this bird was formerly pronounced *cormaran* or *cormarin*, being contracted from *corvus marinus* or *sea-raven* †: the Greeks stiled it the *bald-raven*. Yet it resembles the raven in nothing but its black plumage, and even this is downy, and of a lighter shade.

The Cormorant is a pretty large bird with

* In Greek Φαλακροκοράξ, from φαλακρος *bald*, and κοράξ *a raven*. The Spanish name *Cuervo Calvo* has the same signification: and the notion of *water* or *sea-raven* is implied in modern Latin, in Italian, in German, and Silesian, by the appellations of *Corvus Aquaticus*, *Corvo Marino*, *Wasser-Rabe*, *See-Rabe*. In Swedish it is termed *Hafst-tjaeder*: in Norwegian *Skary*; and in the isle of Feroe *Hupling*: in Polish *Kruk wodny*. In some of the French provinces it is stiled *Crot-Pescherot*, or *Dirt-fisher*.

† Caius, or Dr. Kay, in Gesner, conjectures, that *cormorant* is a corruption of *corvorant*, *corvus vorans*, or *devouring raven*: and Pennant and Latham have adopted *corvorant*. But it is doubtful whether, for the sake of a specious etymology, we should alter a word of such common use in our language: the derivation assigned in the text is besides more probable.—T.

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N^o 218



THE CORMORANT.

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webbed feet, which swims and dives with equal facility, and devours multitudes of fish: it is nearly of the bulk of the geese, of a narrower form, rather thin than thick, and lengthened by a large tail more spread than usual in the aquatic birds; this tail consists of fourteen stiff feathers like those of the woodpecker's tail; they are black glossed with green, like almost all the rest of the plumage: the back is waved with black festoons on a brown ground; but these shades vary in different individuals, for Salerne says, that the colour of the plumage is sometimes a greenish black: all of them have two white spots on the outside of the legs; with a white gorget, which embraces the top of the neck like a chin-piece: there are white feathery filaments like bristles, stuck on the top of the neck and the upper part of the head, of which the front and the sides are bald*: a skin, also naked, clothes the under side of the bill, which is straight to the point, where it is bent into a very sharp hook.

The Cormorant is one of the few birds which have four toes connected together by a single piece of membrane. We might thence infer that it is a very great swimmer; yet it remains less in the water than many other aquatic birds,

* "Some animals are naturally bald, as the ostriches and the water ravens, which thence derive their Greek name." *Plin.* lib. ii. 28.

whose soles are neither so continuous nor so broad: it frequently flies and perches on trees. Aristotle ascribes this habit to it alone of all the *palmiped* birds *; but it is common to the pelican, the booby, the frigate, the anhinga, and the tropic bird; and what is singular, these birds, together with it, form the small number of the aquatic species which have the four toes connected by continuous membranes. This coincidence has induced modern ornithologists to range five or six birds under the generic name of *pelican* †. But the analogy must be strained for the sake of a scholastic generalization; when, from the resemblance of a single part, the same appellation is given to species so different from each other as that of the tropic bird, for instance, and that of the common pelican.

The Cormorant is so dextrous in fishing, and so voracious, that when it visits a pool, it commits alone more havoc than a whole flock of other piscivorous birds. Fortunately, it resides almost constantly on the sea-shores, and seldom occurs in inland countries ‡. As it can remain a long time plunged §, and swims under water

* *Hist. Animal.* lib. viii. 3.

† Klein and Linnæus have formed this family. The Cormorant there figures, under the appellation *pelecanus carbo*; the frigate, under that of *pelecanus aquilus*, &c.

‡ "On the 27th of January (1779) a Cormorant was brought to me, which was just killed on the side of the river Ouche: it had perched on a willow." *Extract of a letter from M. Hebert.*

§ Schwenckfeld.

with

with the rapidity of a dart, its prey scarce ever escapes, and it almost always emerges holding a fish across in its bill: to swallow the victim it employs a singular expedient; it tosses up the fish in the air, and dextrously catches the head in falling, so that the fins lie flat and favour the passage down the throat, while the membranous skin that lines the under side of its bill stretches to admit the whole body of the fish, which is often very large in proportion to the neck of the bird.

In some countries, as in China, and formerly in England*, the skill of the Cormorant in fishing was turned to profit: for, by buckling a ring about the lower part of its neck, to prevent deglutition, and accustoming it to return with its acquisitions in its bill to its master, it was made, so to say, a domestic fisher. On the rivers of China, the Cormorants, thus buckled, are perched on the prows of the boats, and on a signal being given, by striking the water with an oar, they plunge into that element, and quickly emerge with a fish, which is taken out of their bill; and this toil is continued, till its master, satisfied with the earnings, loosens its collar, and permits it to fish for its own account†.

Hunger alone gives activity to the Cormorant; it becomes lazy and sluggish after its appetite is glutted. It inclines to fat, and though

* According to Lynceus in Willughby.

† Nieremberg. Voyage à la Chine, par de Feynes: *Paris*, 1630, p. 173. Hist. Gen. des Voy. tom. vi. p. 221.

it has a very strong smell, and an unpleasant taste, it is not always despised by sailors, to whom the simplest and coarsest fare is often more delicious than the most exquisite viands to our delicate palates*.

The Cormorant occurs in the remotest latitudes; in the Philippines†, in New Holland‡, and even in New Zealand§. In the bay of Sal-dana there is an island stiled the *Island of Cormorants*||, because it is covered, as it were, with these birds. They are not less common in other parts near the Cape of Good Hope. "Some-times flocks," says the Viscount de Querhoënt, "are seen of two or three hundred in the road off the Cape. They are not timid; which is no doubt because they are little molested. They are naturally indolent: I have seen them rest six hours on the buoys of our anchors. Their bill is furnished below with a skin of a fine orange colour, which extends under the throat a few lines, and dilates at pleasure. The iris is of a fine light green;

* "Their flesh has an exceeding rank fishy taste; however it is pretty good, being very fat." *Dampier*.—"We killed a great number of Cormorants, which we saw perched on their nests in the trees, and which were roasted or dressed in a stove, and afforded us excellent dishes." *Cook's First Voyage*.

† It is there called *Colocolo*. See *Philos. Transf.* N° 285, and *Hist. Gen. des Voy. tom. x. p. 412*.

‡ Cook.

§ Ibid.

• Flacourt.

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“ the pupil black ; the orbit edged with a violet
 “ skin: the tail is formed like that of the wood-
 “ pecker, containing fourteen hard sharp quills.
 “ The old ones are entirely black ; but the
 “ young ones are all gray the first year, and
 “ have not the orange skin under the bill.—
 “ They were all very fat *.”

The Cormorants are also very numerous in Senegal, according to M. Adanson †. They seem also to be the *Plutons* of the island Mauritius, as described by the traveller Leguat ‡; and,

* Remarks made in 1774, by the Viscount de Querhoënt, of his majesty's navy.

† “ We arrived on the 8th October at Lamnai (a little island of the Niger) ; the trees were there covered with such a prodigious multitude of Cormorants, that the Laptots, in less than half an hour, filled a canoe with young ones which had been taken by the hand, or felled with sticks, and with old ones, of which several dozens fell at every shot.” *Voyage au Senegal*, p. 80.

‡ “ On a rock, near the island Mauritius, came birds which we called *Plutons* (Pluto's), because they are entirely black like *ra-vens*; they have also nearly the same shape and size, but their bill is longer, and hooked at the end; their foot is that of the duck: these birds live six months of the year at sea; those in the neighbourhood repaired to our rock, where they hatched. They have a cry as strong almost as the lowing of a calf, and they make a great noise in the night. During the day they were very still, and so tame that they suffered us to take the eggs from under them without stirring; they lay in holes of the most projecting rock that they can find. These birds are very fat, and ill-tasted, unwholesome, and abominably stinking. Though their eggs are hardly better than their flesh, we ate them in necessity; they are white, and as large as those of our *bens*; when these were taken, they retired into their holes, and fought with each other, till they were all over bloody.” *Voyage de François Leguat; Amsterdam, 1708, tom. ii. pp. 45, 46.*

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what is singular, they support alike the heat of that climate and the cold of Siberia. It appears, however, that the severe winters of the northern regions oblige them to migrate: for those which in summer inhabit the lakes in the neighbourhood of Selenginskoi, where they are called *baclans*, have been observed to retire in autumn to Lake Baikal *, there to spend the winter. The same must be the case with the *ouriles*, or Cormorants of Kamtschatka, well described by Kraschenimicoff †, and indicated in the fabulous relation of the Kamtschadales, who say that these birds have bartered their tongue with the wild goats, for the tufts of white bristles on their neck and thighs ‡: yet is it false that these birds have no tongue; and Steller avers, that they sound day and night with a voice like the note of a little hoarse trumpet.

These Cormorants of Kamtschatka pass the night, gathered in flocks, on the projections of craggy rocks, from which they often fall to the ground during their sleep, and then become the prey of the foxes, which are ever on the watch. In the day-time, the Kamtschadales search for their

* "The inhabitants of these cantons believe that when the *baclans* make their nests on the top of a tree, it grows dry; in fact, we saw that all the trees where were nests of these birds had withered; but perhaps they chose trees already decayed." Gmelin; *Voyage en Sibirie*, tom. i. p. 244.

† Hist. Gen. des Voy. tom. xix. p. 272.

‡ Idem. tom. i. p. 272.

eggs, at the risk of tumbling upon the precipices, or dashing into the sea. And to catch the birds themselves, they fasten a running knot to the end of a rod: the heavy, indolent Cormorant, when once seated, cares not to stir, but only turns his head from right to left to avoid the noose, which is at last slipped on his neck.

The head of the Cormorant is sensibly flat, like that of most diving birds; its eyes are placed very much forward, and near the corners of the bill, whose substance is very hard, and shining like horn; the feet are black, short, and very strong; the tarsus is very broad, and flattened sidewise; the middle nail is serrated interiorly, like that of the heron; the pinions are very long, but clothed with short quills, which makes it fly heavily, as Schwenckfeld observes. This naturalist is the only person who asserts that he saw a particular little bone, which rising behind the *cranium*, descends in form of a thin blade, and is inserted into the muscles of the neck.

[A] Specific character of the Cormorant, *Pelecanus Carbo*: "Its tail is rounded, its body black, its head somewhat crested." It makes its nest with sticks, sea-weed, grass, &c. and lays six or seven eggs, which are white and of an oblong shape.

The S H A G.

LE PETIT CORMORAN, ou LE NIGAUD*.

Buff.

Pelecanus Graculus. Linn. and Gmel.*Phalacrocorax Minor.* Briss.*Graculus Palmipes.**Corvus Aquaticus Minor.* } Aldrov. Sibb. &c.*The Shag, or Crane.* Ray and Will.

THE heaviness or rather indolence natural to all the Cormorants, is still more remarkable in the present; which has, for that reason, been styled the *Shag* or *Ninny* (*Niais* ou *Nigaud*). This species is not less diffused than the former: it occurs particularly in the islands and the extremities of the southern continents. Cook and Forster found it on the island of Georgia; which, though not inhabited, and almost inaccessible by man, is stocked with these little Cormorants, which share the domain with the penguins, and lodge among the tufts of rushy grass, the only vegetable production in that dreary tract. Staten-land is similar, and contains likewise great numbers of birds. An island in the Straits of Magellan was so full of them, that Captain Cook called it *Shag Island*. It is in these extremities

* i. e. The Little Cormorant, or Simpleton.

of the globe that nature, benumbed with cold, has allowed five or six species still to subsist, the last inhabitants of the territories invaded by the progress of refrigeration: they live in calm apathy, the gloomy prelude of the eternal silence which soon will there establish its iron reign *.

“ One

* The gradual refrigeration of the earth is a favourite hypothesis of our ingenious author. He had supposed that a comet, reeling in its eccentric orbit, dashed against the sun, and struck off that ignited matter, which, gathering into globes and recovering from disorder, formed our planetary system. He made a great many experiments with heated metallic balls of different diameters, to discover their rate of cooling: and in his *Epochs of Nature*, the most fanciful of all his works, he transferred these deductions to the globe of the earth; he poetically delineated its condition at the various stages of cooling; and he predicted the glacial crust, which, in process of ages, will imprison old ocean.

But this account of the formation of the world is totally inconsistent with the established laws of motion; and even were it admitted, it would only remove the difficulty a single step; for how was the comet produced? The experiments with heated balls are inconclusive. Bodies have no natural tendency to cool, any more than to heat: they only maintain an equality of temperature with the surrounding matter. In ordinary cases, cooling is produced by the successive application of different portions of air to the hot surface. A body colder than the atmosphere would in the same manner be heated. In the exhausted receiver of an air-pump, the progress of heating or cooling is much slower; and could a perfect vacuum be obtained, there is every reason to think that a body would for ever retain the same temperature. The earth would therefore preserve perpetually its heat; and even though we should suppose it to be environed with a subtle æther (which is altogether improbable) the communication of this heat to other planets or systems would be extremely slow and imperceptible. Nay, if there be any difference, the earth is growing warmer, by the incessant absorption of the sun's rays: yet so vast is its mass, that this effect will not much exceed a degree in a thousand years. History seems to corroborate this

conjecture.

“ One is astonished,” says Captain Cook, “ at
“ the peace which prevails in this land. The
“ animals that inhabit it would seem to have
“ formed a league not to disturb their mutual
“ tranquillity. The sea-lions occupy the greatest
“ part of the coast; the white bears reside in
“ the interior part of the island; and the Shags
“ lodge in the loftiest rocks: the penguins fettle
“ where they have easiest communication with
“ the sea; and the other birds chuse places more
“ retired. We have seen all these animals in-
“ termingled and walking together, like cattle
“ or poultry in a farm-yard, without offering
“ the least injury to each other.”

In these dreary wastes, naked, and almost frozen, the Shags breed in the ragged sides of rocks, or the projecting cliffs that overhang the ocean. In some parts, their nests are found among small patches of flags, or in the tall tufts of the coarse grass which we have mentioned. There they inhabit, collected in thousands: the report of a musket does not disperse them; they only rise a few feet, and alight again into their nests. Nor need we use fire-arms, for they may

conjecture. Witness the ancient and modern state of Italy, a country which has remained nearly in the same state of cultivation.

With regard to the huge bones dug up in Siberia, and believed to be those of the elephant, which is a native of hot climates, they probably belong to some animal whose species is now extinct. Such at least was the decision of the celebrated Dr. Hunter, upon examining the bones found near the Ohio, in the back parts of North America. T.

be felled with sticks, and yet their companions will not be alarmed, or endeavour to escape from the massacre. Their flesh, especially that of the young ones, is pretty good food.

These birds do not stray far into the sea, and seldom lose sight of land. Like the penguins, they are clothed with a very thick plumage, well adapted to guard against the severe and continual cold of the frozen regions which they inhabit. Forster seems to admit several species or varieties of this bird; but as he does not sufficiently distinguish them, and as the different mode of nestling on tufts or in the crevices of rocks is insufficient to discriminate the species, we shall describe only the common Shag known in our climates.

They are pretty numerous on the coast of Cornwall and in the Irish sea, particularly on the Isle of Man*. They are found also on the shores of Prussia†, and in Holland‡ near Sevenhuis, where they breed on tall trees. Willughby says, that they swim with their body entirely immersed, and only their head out of the water; and that they are as nimble and alert in that element as they are sluggish on land, and escape the shot by diving the instant they perceive the flash. In general, the Shag has the same natural habits with those of the cormo-

* Ray.

† Klein.

‡ Ray.

rant *, which it resembles in its figure and in its colours : the difference consists in this, that its body and limbs are smaller and more slender, its plumage brown under the body, its throat not naked, and that there are only twelve quills in the tail †.

Some ornithologists have stiled the Shag the *palmiped jay* : but this is as little proper as the vulgar appellation of *water raven* given to the cormorant. The *palmiped jays* which Captain Wallis met with in the Pacific Ocean ‡ are probably a species of Shag ; and to it we shall also refer the *handsome cormorants* of which Captain Cook saw large flocks nestled in small cavities, which these birds seemed to have widened for themselves in a rock of schist, whose broken sides terminate New Zealand.

The interior organization of the Shag presents many curious particulars, which we shall extract from the observations of the Academicians. A bony ring embraces the *trachea arteria* above the bifurcation : the *pylorus* is not inserted at the bottom of the stomach as usual, but opens into the middle of that ventricle, leaving one - half hanging below ; and this lower part is very fleshy and muscular, so as to

* " To swallow a fish it tosses it into the air, and catches with " its bill the head foremost. We have seen it perform this manoeuvre with such address, that it never missed." *Anciens Mémoires de l'Académie des Sciences, tom. iii. partie 3. p. 214.*

† Ray and Willughby.

‡ In latitude 20 degrees 50 minutes north.

force up by its contraction the food to the orifice of the *pylorus*: if we blow into the *œsophagus*, it swells and appears a continuation of the stomach, which otherwise is separated from it by a narrow ring: the intestines are inclosed in an *epiploon*, well lined with fat, of the consistence of tallow; this fact is an exception to what Pliny says in general of oviparous animals, that they have no epiploon*. The shape of the kidneys is singular; they are not parted into three lobes, as in other birds, but jagged like a cock's comb on their convex portion, and divided from the rest of the lower belly by a membrane which invests them: the *cornea* of the eye is of a bright red, and the crystalline approaches the spherical form, as in fish: the base of the bill is furnished with a red skin, which also furrounds the eye: the aperture of the nostrils is so narrow a slit as to have escaped observers, who have asserted, that the cormorants, both the greater and the lesser, want the nostrils: the greatest toe in these two species is the outer, composed of five *phalanges*, the next one containing three, the third three, and the last, which is the shortest, only two: the feet are of a shining black, and armed with pointed nails†:

* Lib. ii. 37.

† M. Perrault refutes seriously the fable of Gesner, who says, that there is a kind of cormorant which has a membranous foot, with which it swims, and another whose toes are naked, with which it seizes its prey.

under the feathers there is a very fine down, as thick as that of the swan; small silky feathers, close like velvet, cover the head; from which Perrault infers, that the cormorant is not the bald raven, *phalacrocorax*, of the ancients. But he ought to have qualified this assertion, having himself observed before, that on the sea-shores there occurs a great cormorant different from the small cormorant or shag: and this bald-headed great cormorant is, as we have seen, the true *phalacrocorax* of the ancients.

[A] Specific character of the Shag, *Pelecanus-Graçulus*: "Its tail is rounded; its body black, below brown; it has twelve wing-quills."

The SEA SWALLOWS.

LE HIRONDELLES DE MER. *Buff.*

OF the multitude of names * transferred for the most part improperly from the land animals to those of the sea, a few have been happily applied; such as that of the Swallow, given to a small family of piscivorous birds, which resemble our swallows by their long wings and forked tail, and by their continual circling on the surface of the water. As the land swallows flutter swiftly in the fields or round our dwellings in search of winged insects, so the Sea Swallows circle and glance rapidly on the liquid plains, and nimbly snatch the little fish which play on the surface. Such resemblance in the form and habits of these two kinds of birds might, in some measure, justify their receiving the same appellation: yet they differ essentially in the shape of their bill, and the structure of their feet. The Sea Swallows have small membranes shrunk between their

* In German *See Schwalbe*: in Swedish, and the other northern languages, *Taern*, *Terns*, *Stirn*; whence Turner derives the name *Sterna*, adopted by nomenclators to distinguish this genus of birds.

toes,

toes, which are not adapted for swimming* : for nature seems to have bestowed on these birds only the power of their wings, which are extremely long, and scooped like those of the common swallows. They likewise glide and circle, sink and rise in the air, crossing and entwining their various irregular track in a thousand directions†; their flight is impelled by starts of momentary caprice, and led by the sudden glimpse of their fugitive prey. They snatch the victim on wing, or alight only a moment on the surface; for they are averse to swim, though their half-webbed feet might contribute to that purpose. They reside commonly on the sea-shores, and frequent also lakes and great rivers. The Sea Swallows, in flying, scream loud and shrill like the martins, especially when, in calm weather, they rise to a great height in the air, or when they congregate in summer to make distant excursions, but particularly in the breeding season, at which time they are more than ever restless and clamorous, perpetually redoubling their motions and their cries; and as they are always extremely numerous, we can hardly, without being stunned with

* Hence Aldrovandus, looking upon the Sea Swallows as little gulls, distinguishes them by the name of cloven-footed gulls, *lib. xix. 10. de laris fissipedibus.*

† "Sailors call those nimble birds found at sea, *croiseurs* (*crossers*), "when they are large; *goelettes* when they are small." *Remarks made by the Viscount de Querboënt.*

the noise, approach the shore, where they have disposed their eggs or collected their young. They arrive in flocks on our western coasts in the beginning of May*: most of them remain without quitting the beach; others advance farther, and following the rivers, seek the lakes and the large pools†. Every where they live on small fish, and sometimes they even snap winged insects in the air. The report of fire-arms does not intimidate them, and this signal of danger, so far from driving them off, seems rather to attract them; for the instant the fowler hits one of a flock, the rest croud about their wounded companion, and drop with it to the surface of the water. The land swallows are likewise remarked to gather at the noise of a gun, or at least they are not frightened away. Does not this habit proceed from a blind security? Birds that are hurried incessantly with a rapid flight, are more incautious than such as squat in the furrows or perch on the trees; they have not learnt, like these, to observe and distinguish us, and to fly from their most dangerous enemies.

The feet of the Sea Swallows differ not from those of the land swallows, except that they are semi-palmated; for in both they are very small

* Observation made on those of Picardy, by M. Baillon.

† As that of Indre, near Dieuze in Lorraine, which, including its windings and inlets, is seven leagues in compass.

and short, and unfit for walking. The pointed nails which arm the toes seem not more necessary to the Sea Swallow than to the land one, since these birds equally seize the prey with the bill: that of the Sea Swallow is straight, tapered to a point, smooth, not indented, and flat at the sides. The wings are so long, that the bird when at rest seems incumbered by them, and in the air appears all wing. But if this great power of flight makes the Sea Swallow an inhabitant of the air, it has other properties that distinguish it as an inhabitant of the water: for, besides the scalloped membrane between the toes, a small portion of the leg, as in almost all the aquatic birds, is bare, and the body is covered with a thick and very close down.

This family of Sea Swallows includes a number of species, most of which have crossed the ocean, and stocked its shores. They are found spread from the seas, the lakes*, and the great rivers† of the north, as far as the vast boundaries of the Southern Ocean‡; and they occur
in

* Even their name *taern* or *terns*, in the northern languages, signifies *lake*.

† Gmelin says, that he saw innumerable flocks of them on the Jenisea, near Mangascha in Siberia. *Voyage en Sibirie*, tom. ii. p. 56.

‡ Captain Cook saw Sea Swallows near the Marquesas, which are islands seen by Mendana.—The same navigator was attended by these birds from the Cape of Good Hope to the 41st degree of south latitude.—Captain Wallis met with them in the 27th degree of latitude and the 106th degree of west longitude, on the great South Sea.—“The low islands within the tropics, and the whole of

“ the

in almost all the intermediate regions*. We shall adduce the proofs in describing the different species.

"the Archipelago which surrounds Otaheite, are filled with flights of Sea Swallows, boobies, frigates, &c." *Forster*.—
 "The Sea Swallows roost under the bushes in Otaheite; Mr. Forster, in an excursion before sun-rise, took several that were sleeping along the road." *Cook*.

* Sea Swallows are found in the Philippines, in Guiana, and Ascension. We may recognize them in Dampier's description of birds which he met with near New Guinea. "On the 30th of July, all the birds which had hitherto accompanied us, quitted the vessel; but we saw others of a different kind, which were as large as lapwings, with a gray plumage, the space about their eyes black, their bill red and pointed, their wings long, and their tail forked as in swallows."—"On the 13th of July 1773, in latitude 35° 02', and longitude 2° 48', during a violent north-west wind, M. de Querhoënt saw many petrels and Sea Swallows; these were at least a half smaller than the petrels; their wings were very long, and shaped like those of our martin: they usually keep in flocks, and come very near vessels."

The GREAT SEA SWALLOW.

LE PIERRE-GARIN, ou LA GRANDE HIRONDELLE DE MER DE NOS CÔTES. *Buff.*

FIRST SPECIES.

Sterna-Hirundo. Linn. and Gmel.

Sterna Major. Briff.

Sterna. Gefner, Aldrov. Johnst. &c.

Larus Hirundo. Kramer.

Larus Albicans. Marfigli, and Klein.

Hirundo Marina Major. Will. and Sibb.

The Greater Tern. Pennant.

The Common Tern *. Latham.

THIS is the largest species of Sea Swallows that appears on our coasts, being near thirteen inches from the end of the bill to that of the nails, near sixteen to the end of the tail, and almost two feet across the wings: its slender stature, its handsome gray mantle, its black cap, and its red bill and feet, conspire to make it a beautiful bird.

On the return of spring, these Swallows arrive

* In Swedish *Tærna*: in Norwegian *Terne, Tende, Tendelobe, Sand-tolle, Sand Tærna*: in Danish *Tærna*: in Dutch *Icsterre*: in Swiss *Schirring*: in Polish *Jaskolla-morska, or Kulig-morski*: in Icelandic *Therne, Krna*: in Lapponic *Zhierrek*: in Greenlandic *Emerkotulak*.

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THE COMMON TERN.

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in great flocks on our maritime shores, where they separate into troops: some penetrate into the interior provinces, such as the Orleanois *, Lorraine †, Alsace ‡, and perhaps farther, following the course of the rivers, and settling on the lakes and great pools; but the greater part remain on the coasts, and make long excursions into the sea. Ray observes, that they are usually found fifty leagues from the most western part of England, and are even met with the whole way to Madeira; and that a vast multitude resort to breed on the *Salvages*, desert islets at a small distance from the Canaries.

On the coasts of Picardy, these birds are named *pierre garins*; they are lively and agile, says M. Baillon, venturous and skilful fishers: they dart after their prey into the sea, emerge again in an instant, and mount to their former height in the air. They digest the fish as quickly almost as they catch it; the part which touches the bottom of the stomach dissolves first: the same effect is observed in herons and gulls. So great is the digestive power, that the Sea Swallow can, after the interval of an hour or two, make a second meal. They fight frequently, quarrelling about their prey. They swallow fish more than an inch thick, and so

* Salerne,

† Lottinger.

‡ On the Rhine near Strasburg, where they are called *Speurer*, according to Gefner.

long,

long, that the tail projects out of their bill. Those that are taken and sometimes fed in gardens*, refuse not flesh, which they will not touch in the state of liberty.

These birds pair on their arrival about the first days of May. Each female drops in a small hole on the naked sand two or three eggs, very large in proportion to her bulk. The place chosen by them for this purpose is always screened from the north wind, and situated below some downs. If a person approach the nests, the parents will rush precipitately from aloft, and flutter round him with loud reiterated screams of anger and inquietude.

Their eggs are not all of the same colour, some being very brown, others gray, and others almost greenish: these last probably belong to young pairs; for they are rather smaller, and it is known that of all birds which have coloured eggs, those of old ones are deeper stained, rather thicker, and less pointed than those of young ones, especially in their first layings. The female of this species covers only during the night, or in the day when it rains: at all other

• "I have had several in my garden, where I could not keep them long, because of the annoyance of their perpetual cries, which were continued even during the night. These captive birds lost almost entirely their chearfulness; formed to sport in the air, they feel incumbered on the ground, their short feet hamper them on every obstacle they meet." *Extract of a Memoir of M. Baillon, on the Common Terns*, from which we take the details of the history of these birds.

times she leaves her eggs to the heat of the sun. "When the spring is fine," M. Baillon writes me, "and the incubation was begun in warm weather, the three eggs, their usual number, are hatched in three successive days, in the order they were laid; the development in the two first being forwarded by the influence of the solar beams. If the weather was rainy or cloudy in the commencement, that effect is not perceived, and the eggs burst together. The same remark has been made with regard to sea-larks and sea-pies; and it may reasonably be extended to all birds which lay on the naked beach.

"The young Sea Swallows, when just hatched, are clothed with a thick down, light gray, and sprinkled with some black spots on the head and the back. Their parents fetch them bits of fish, particularly liver and gills: and when the mother comes at night to cover the unhatched egg, the callow chicks creep under her wings. These maternal cares last but a few days; the young assemble at night, and lie close together. Nor do the parents long nourish them by the bill: without descending each time to the ground, they drop, or so to speak, rain upon them food: the young ones, now voracious, fight and quarrel with each other, and scream loudly. Yet the parents continue to watch them from aloft in the air; a cry which they give as they glide

VOL. VIII. X "along

“ along conveys the alarm, and instantly the
“ brood squat close on the sand. It would be
“ difficult to discover them, did not the shrieks
“ of the mother betray the spots where they
“ lurk. They make no effort to escape, but
“ may be gathered by the hand like stones.

“ They fly not till more than six weeks after
“ they are hatched, it requiring all that time for
“ their broad wings to grow; like the land
“ swallows, which remain longer in the nest
“ than other birds of the same size, and sally
“ out better feathered. The first feathers of
“ the young Terns are light gray on the head, the
“ back, and the wings; the true colours appear
“ not till after moulting. But they have all
“ the same colours when they return in spring.
“ They depart from the coasts of Picardy about
“ the middle of August; and I remarked that last
“ year, 1779, they chose a north-east wind.”

[A] Specific character of the Common Tern, *Sterna-Hirundo*:
“ Its two outermost tail-quills are parted with black and white.”

The LESSER SEA SWALLOW.

LA PETITE HIRONDELLE DE MER. *Buff.*

SECOND SPECIES.

Sterna Minuta. Linn. and Gmel.*Sterna Minor.* Briss.*Larus Piscator.* Gesner, Aldrov. Johnst. &c.*The Lesser Tern* *. Stillingfleet, Penn. and Lath.

THIS little Sea Swallow resembles the preceding so closely in its colours, that they are distinguished only by their constant and considerable difference of size. The present is not larger than a lark, though as clamorous and roving as the first species †. Yet will it live a prisoner, if caught in a snare. In Belon's time, the fishermen floated a cross of wood, in the middle of which was fastened a small fish for bait, with limed twigs stuck to the four corners, on which the bird darting was entangled by the wings. These little Sea Swallows, as well as the great ones, frequent our seas, lakes, and rivers, and retire also on the approach of winter.

* Near Strasburg it is called *Fischerlin*: in Polish *Ribtu*.

† "It is so noisy as to stun the air, and to molest the people who pass the summer near marshes and brooks." *Belon*.

[A] Specific character of the Lesser Tern, *Sterna Minuta*: "Its body is white, its back hoary, its front and eye-brows white."

The GUIFETTE.

THIRD SPECIES.

Sterna Nævia. Gmel. and Briss.

Rallus Lariformis. Linn.

The Kier-Maww. Klein.

The Cloven-footed Gull. Albin.

The Kamtschatkan Tern. Penn. and Lath.

THIS Sea Swallow is named *Guifette* on the coast of Picardy. Its plumage, which is white under the body, is agreeably variegated with black behind the head, with brown clouded with rusty on the back, and with a handsome gray fringed with whitish on the wings. It is of a middle size between the two preceding, but differs in several particulars with regard to habits and œconomy. Baillon, who compares it with the great sea-swallow, says, that it is distinguished by many characters: 1. It does not continually seek its food on the sea; it is not piscivorous, but rather insectivorous, feeding as much on flies and other insects, which it snaps in the air, as on those which it catches on the water: 2. It is not so clamorous as the great sea-swallow: 3. It does not lay on the naked sand, but chuses in the marshes a tuft of herba

*

or

or moss in some insulated hillock amidst the water or on its brink; it carries thither some dry stalks of herbs, and drops its eggs, which are generally three in number: 4. It covers assiduously seventeen days, and all the chicks burst the shell the same day.

The young cannot fly till after a month, and yet they retire early with their parents, and often before the greater terns. They are seen flying along the Seine and the Loire at the time of their passage. Their flight resembles that of the greater terns; they are even continually in the air: they fly oftener skimming the surface of the water, and rise very high, and with great rapidity.

The BLACK GUIFETTE; or, the SCARE-CROW.

FOURTH SPECIES.

Sterna Fissipes. Linn. and Gmel.

Sterna Nigra. Briss.

Larus Niger. Gesn. Aldrov. Johnst. Ray, &c.

The Scare Crow. Will.

The Black Tern. Penn. and Lath.

So much does this bird resemble the preceding, that in Picardy it has been stiled the *Black Guifette*. The name of *scare-crow* (*epou-ventail*)

ventail) it probably received from the dark cinereous cast of its head, neck, and body: its wings only are of a handsome gray, which is the common garb of the sea-swallows. It is nearly as large as the common guifette: its bill is black, and its small legs are of a dull red. The male is distinguished by a white spot placed under the throat.

These birds have nothing mournful but their plumage, for they are very cheerful, fly incessantly, and, like the other swallows, make a thousand turnings and windings in the air. They nestle among the reeds in marshes, and lay three or four eggs of a dirty-green, with blackish spots, that form a zone near the middle*. They also pursue winged insects, and resemble the preceding species in all their habits†.

* Willughby.

† *Observations communicated by M. Baillon, of Montzeuil-sur-mar.*

[A] Specific character of the Black Tern, *Sterna Fiffipes*: "Its body is black, its back cinereous, its belly white, its feet reddish." It is very numerous in the Tartarian deserts.

The G A C H E T.

F I F T H S P E C I E S.

Sterna Nigra. Linn. and Gmel.*Sterna Atricapilla.* Briss.*The Lesser Sea Swallow.* Albin.

A FINE black covers the head, the throat, the neck, and the top of the breast, like a hood or domino; the back is gray, and the belly white: it is rather larger than the guifettes. The species seems not to be very common on our coasts, but it occurs on those of America, where Father Feuillée has described it*, and

* It seems to be indicated by the name *buse* in the following passage of the navigator Dampier. "We saw some boobies and buses, and at night we took one of the latter: it was different both in colour and figure from any that I had ever seen; its bill was long and slender, as in all other birds of this kind; its foot flat like that of ducks; its tail longer, broad, and more forked than that of swallows; its wings very long; the upper side of its head coally black; small black stripes round its eyes, and a pretty broad white circle which incloses them on either side; its craw, its belly, and the upper side of its wings, white; but the back and the under side of the wings pale black or smokey. . . . These birds are found in most places between the tropics, as well as in the East Indies, and on the coast of Brazil; they pass the night on land, so that they never go more than thirty leagues to sea, unless they are beaten by some storm. When they hover about vessels, they generally perch at night, and suffer themselves to be taken without stirring; they make their nests on the hillocks or the adjacent sea-rocks."



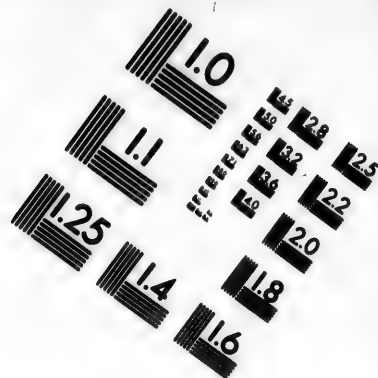
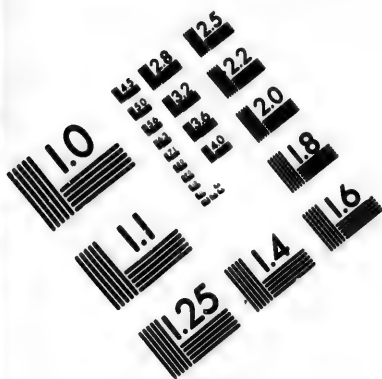
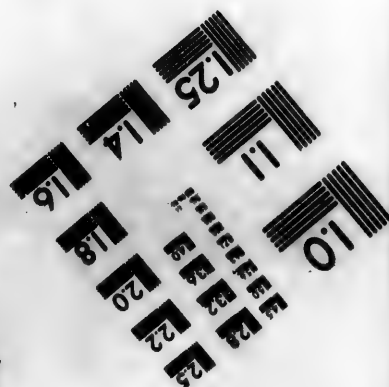
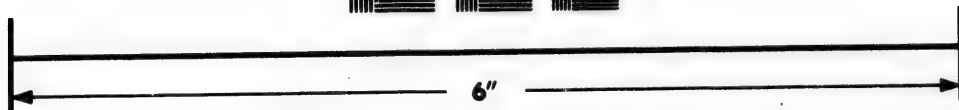
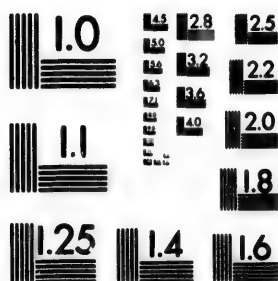


IMAGE EVALUATION TEST TARGET (MT-3)



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observed that it lays on a bare rock two eggs, very large for its size, and mottled with dull purplish spots on a whitish ground. The subject examined by this traveller was larger than the one described by Brisson, who has notwithstanding ranged them together under the name of *Gachet*.

[A] Specific character of the *Sterna Nigra*: "Its body is hoary, its head and bill black, its feet red."

The SEA SWALLOW of the PHILIPPINES.

SIXTH SPECIES.

Sterna Panayensis. Gmel.
The Panayan Tern. Lath.

SONNERAT found this bird in the island of Panay, one of the Philippines: it is as large as the common tern, and is perhaps of the same species, modified by the influence of climate; for all the fore side of its body is white, the upper side of the head is spotted with black; and the only difference is, that the wings and tail are grayish below, and amber colour above; the bill and feet are black.

The SEA SWALLOW OF GREAT ALAR-EXTENT.

SEVENTH SPECIES.

Sterna Fuliginosa. Gmel.

The Egg-Bird. Forster and Cook.

The Noddy. Hawkeſworth and Dampier.

The Sooty Tern. Penn. and Lath.

THOUGH all the ſea ſwallows have great extent of wings, that character is more remarkable in this ſpecies, which is not larger than the common tern, and yet meaſures two feet nine inches acroſs the wings. There is a ſmall white creſcent on its front; the upper ſide of the head and of the tail is a fine black, and all the under ſide of the body white; the bill and feet are black. We are indebted to the Viſcount de Querhoënt for the account of this ſpecies, which he found at the iſle of Aſcenſion. “ It is inconceivable,” ſays he, “ how many ſwallows are ſeen at Aſcenſion; the air is ſometimes darkened with them, and the little plains entirely covered: they are very clamorous, and continually pour forth their harſh, ſhrill cries, exactly like thoſe of the white owl. They are not timorous; they flew over
“ my

“ my head, and almost touching me : those
“ which sat on their nests did not spring as I
“ approached, but struck furiously with their
“ bill when I attempted to take them. Of more
“ than six hundred nests, I saw only three that
“ contained two chicks or two eggs : all the
“ rest had only one. They were placed on the
“ flat ground, near some heaps of stones, and
“ all close beside each other. In one part of
“ the island, where a flock was settled, I found
“ in all the nests the young bird already grown,
“ and not a single egg. Next morning I light-
“ ed on another colony, where was only one egg
“ on which incubation had begun, but no
“ chick : this egg, which surprized me by its
“ magnitude, is yellowish, with brown spots and
“ other spots of pale violet, more crowded on
“ the broad end. No doubt these birds have
“ several hatches in the year. The young are
“ at first covered with a light gray down. When
“ caught in the nest, they immediately reject
“ the fish from their stomach.”

[A] Specific character of the Sooty Tern, *Sterna Fuliginosa* :
“ It is black ; its under side, its cheek its front, and the shafts of
“ all its quills, white.”

THE GREAT SEA-SWALLOW OF CAYENNE,

EIGHTH SPECIES,

Sterna Cayanaensis. Gmel.

The Cayenne Tern. Lath.

THIS species might be stiled the *greatest sea-swallow*, for it exceeds, by two inches, the common sea-swallow of Europe. It is found in Cayenne: and, like most of the preceding, it has all the under side of the body white; a black hood on the back of the head, and the feathers of the mantle fringed on a gray ground with dilute yellowish or rusty.

WE know only these eight species of sea-swallows: and we remove from this family of birds the *cinereous tern* of Brisson, because its wings are short; whereas the extent of wings is the chief character by which nature has distinguished them, and is the source of all their other habits.

Fuliginosa:
the shafts of

The TROPIC BIRD.

L'OISEAU DU TROPIQUE, ou LE PAILLE-
EN-QUEUE *. *Buff.*

WE have seen birds travel from north to south, and with boundless course traverse all the climates of the globe: others we shall view confined to the polar regions, the last children of expiring nature, invaded by the horrors of eternal ice. The present, on the contrary, seems to attend the car of the sun under the burning zone, defined by the tropics †: flying perpetually amidst the tepid zephyrs, without straying beyond the verge of the ecliptic, it informs the navigator of his approach to the flaming barriers of the solar track. Hence it has been called the *Tropic Bird*, because it resides within the limits of the torrid zone.

The most sequestered islands of India and America, situated nearest the equator, seem the

* In French *Paille-en-cul*, or *Fetu-en-cul*, (*straw-in-arse*) and *Queu-de-fleche* (*arrow-tail*): the Dutch name *Pylstaart*, and the Spanish *Rabo-de-junco*, signify the same.

† Probably in this view Linnaeus has given it the poetical name of Phaeton, *Phaëton Æthereus*.

favourite

N^o 220



THE COMMON TROPIC BIRD.

favourite haunts of these birds; such as that of Ascension, St. Helena, Rodrigue, and isles of France and Bourbon. In the vast expanse of the northern Atlantic, they have strayed to Bermudas, which is their farthest excursion beyond the bounds of the torrid zone*: they traverse the whole of this space†, and occur again towards the southern limit, where they inhabit the chain of islands discovered by Captain Cook, the Marquesas, Easter island, the Society and Friendly islands. He found them also in open sea near these latitudes‡: for though their appearance may be regarded as the token of the proximity of land, they usually rove many hundred leagues, and sometimes venture to prodigious distances§.

Besides

* "One seldom sees these birds except between the tropics and at great distance from land; however, one of the places where they multiply is near nine degrees beyond the tropic of Cancer; I mean the Bermudas, where these birds breed in the clefts of the high rocks that gird these islands." *Cassidy*.

† The Tropic Birds are found in the greater and the lesser Antilles. See *Dutertre, Labat, Rochefort, &c.*—"In going by sea from Fort St. Peter to Fort Royal, in Martinico, distant seven leagues, we observe lofty cliffs that environ the island; in the holes of these rocks the Tropic Birds hatch." *Remark of M. de la Berde, king's physician at Cayenne*.

‡ The island which Tasman discovered in 22° 36' latitude south, received the name of *Pylpaart*.

§ "We saw a Tropic Bird in 20° latitude north, and 336° longitude. I was surprized to find them at such a great distance from land. Our captain, who had made several voyages to America, observing my surprize, assured me that these birds left the islands in the morning to earn their subsistence on the vast ocean,

Besides its powerful and rapid flight, the broad and entirely palmated feet of the Tropic Bird enable it, when fatigued with its distant journies, to rest on the surface of the water*. Its toes are connected by a membrane as in the cormorants, the boobies, the frigates, which it resembles by this character, and also by the habit of perching on trees†. Yet it is more analogous to the sea-swallows than to any of these birds: like them, it has long wings which cross on the tail when in a state of repose: its bill too is shaped like theirs, though stronger, thicker, and slightly indented on the edges.

"ocean, and returned in the evening to their quarters; in short, reckoning southerly, they must have been about 500 leagues from these islands." *Feuillée*, *Observ.* 1725, p. 170.

"In 27° 4' latitude south, and 103° 30' longitude west, in the first days of March, we saw Tropic Birds." *Cook*.—"We saw man-of-war birds, gulls, and Tropic Birds, which we believed to come from St. Matthew or Ascension, which we had left behind us." *Id.*—"On the 22d of May, 1767, we were by observation in 111° longitude west, and 20° 18' latitude south; the same day we saw bonettoes, dolphins, and Tropic Birds." *Wallis*.—"Being in 20° 52' latitude south, and 115° 30' longitude west, we caught for the first time two bonettoes, and we saw several; we saw also several Tropic Birds." *Byron*.

"In 18 degrees south latitude, on the meridian of Juan Fernandez, running eastward, we saw a number of Tropic Birds." *Le Maire*.—"In 29° latitude south, and about 133° longitude west, we saw the first Tropic Bird." *Cook*.

* Labat believes that they even sleep on the water.

† "During three months which I passed at Port Louis in the isle of France, I never observed any sea-bird except some Tropic Birds, which crossed the roads in their way to the woods." *Remarks made by the Viscount de Querboint, on board his Majesty's ship the Victory, in 1773 and 1774.*

It is nearly as large as a common pigeon. The fine white of its plumage would alone suffice to distinguish it; but its most striking character is a long double shaft, which appears like a straw fixed into the tail, whence its name in French *. This is formed by the production of the two middle quills of the tail, which is extremely short; they are almost naked, edged only with very narrow webs, and they extend twenty-two or twenty-four inches. Often they are of unequal length, and sometimes only one is seen; which may be owing to some accident, or to moulting: for in that season they drop it, and then the inhabitants of Otaheite and the neighbouring islands gather these long feathers in their woods, whither these birds come to repose at night †; the islanders weave them into tufts and chaplets for their warriors ‡. The Caribs thrust them through the *septum* of the nose, to look handsomer or more ferocious §.

We may readily suppose, that a bird whose flight is so free, so lofty, so vast, cannot be re-

* *Paille-en-Queue.*

† "As we set out before sun-rise, Tahea and his brother, who accompanied us, took sea-swallows which were sleeping on the bushes along the road; they told us, that many water fowls came to repose on the mountains after flying the whole day at sea in quest of food, and that the Tropic Bird in particular repaired to these retreats. The long feathers of its tail, which it sheds annually, are commonly met with on the ground, and the natives are eager to find them." *Forster.*

‡ *Idem.*

§ Dutertre.

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conciled to captivity*. Its short legs placed behind render it as heavy and awkward on the ground as it is nimble and active in the air. Sometimes the Tropic Birds, spent by the blustering of storms, alight on ships' masts, and suffer themselves to be taken with the hand†. Leguat, the navigator, speaks of a diverting contest between them and his sailors, whose caps they snatched off‡.

The Tropic Birds have been divided into two or three kinds, which seem to be only varieties nearly allied to the common stock. We proceed to enumerate these, without pretending that they are specifically different.

* "I kept a long time a young Tropic Bird; I was obliged, though it was considerably grown, to open its bill to make it swallow food; it would never eat without assistance. As much as these birds are nimble on wing, they are heavy and stupid in the cage. As their legs are very short, all their motions are constrained: mine slept almost the whole day." *Remarks made at the isle of France, by the Viscount de Querboënt.*

† *Hist. Univer. des Voyages, par Montfaucon; Paris, 1707, p. 17.*

‡ "These birds annoyed us in a singular manner; they surprized us behind, and snatched the caps from our heads; and these attacks were so frequent and so troublesome, that we were obliged to hold sticks constantly in our hands for defence. We prevented them sometimes, when we saw before us their shadow the moment they were about to make their aim. We could never understand what use our caps could be to them, or what they did with those which they had carried off." *Voyages & Aventures de Francis Leguat; Amsterdam, 1708. tom. i. p. 107.*

The GREAT TROPIC BIRD.

FIRST SPECIES.

Phaeton Æthereus. Linn. and Gmel.

Lepturus. Briss.

Avis Tropicorum. Ray and Will.

Plancus Tropicus. Klein.

THIS exceeds the bulk of a large dove-house pigeon; its shafts are near two feet long; all its plumage is white, with little broken black lines above the back, and a black streak, in fashion of a horse-shoe, incloses the eye at the inner corners; the bill and feet are red. It is found in the island of Rodrigue, and in that of Ascension, and at Cayenne; and seems the largest of the genus.

[A] Specific character of the *Phaeton Æthereus*: "It is white; its back, its rump, and the lesser coverts of its wings, streaked with black; its two middle tail-quills black at the base; its bill red." It sometimes roves immense distances beyond the tropics: Linnæus mentions the latitude of $47\frac{1}{2}$ degrees as the limit; and I myself saw one nearly in that parallel, between the Bank of Newfoundland and the Channel. Linnæus adds, that the Tropic Bird feeds on mackarels, dolphins, and sharks (I suppose he means the dead carcases that sometimes float on the surface).

The LITTLE TROPIC BIRD.

SECOND SPECIES.

Phaeton Æthereus. var. 1. Linn. and Gmel.*Lepturus Candidus.* Briss.*Alcyon Media Alba.* Brown.

THIS is scarce equal in size to a common small pigeon. Like the preceding, it has the horse-shoe about the eye, and is besides spotted with black on the feathers of the wings nearest the body, and on the great quills: all the rest of its plumage is white, and also its long shafts. The edges of the bill, which in the great Tropic Bird were serrated with reflected incisures, are much less so in this. It vents at intervals a small cry, *chiric, chiric*, and makes its nest in the holes of craggy rocks: it lays two eggs, according to Father Feuillée, which are bluish, and rather larger than those of a pigeon.

On comparing several individuals of this second kind, in some we remarked reddish or fulvous tints on the white ground of the plumage. This variation proceeds, we presume, from the tender age; and to the same cause we would attribute the *fulvous* cast, described by

RED-SHAFTED TROPIC BIRD. 323

Briffon *, especially as he represents that bird as rather smaller than his *white* one. We also perceived considerable diversity in the bulk of these birds. Many travellers have assured us, that the young ones are not pure white, but potted or stained with brown or blackish: they differ also, because, their shafts and feet, instead of being red, are pale blue. We must, however, observe, that though Catesby affirms, in general, that these birds have their bill and legs red, this is not invariably true, but of the preceding species and of the following; for in this species, which is the most common in the isle of France, the bill is yellowish, like horn, and the legs are black.

* "Tawny white; a bar above the eyes; the scapular feathers "near their extremity, and a stripe above the wings, black; the tail-quills tawny white, their shafts blackish at the origin." *Lepturus Fulvus*.

The RED-SHAFTED TROPIC BIRD.

THIRD SPECIES.

Phaeton Phanicurus. Linn. and Gmel.
The Red-tailed Tropic Bird. Lath.

THE two long shafts of the tail are of the same red with the bill; the rest of the plumage is white, except some black spots on the

324 RED-SHAFTED TROPIC BIRD.

the wing near the back, and a black horse-shoe which environs the eye. The Viscount de Querhoënt was so obliging as to communicate the following note on this bird, which he observed at the isle of France. "The Red-shafted Tropic Bird breeds in this island, as well as the common tropic bird; the latter in the hollow trees of the principal island, the former in the cavities of the small neighbouring islets. The Red-shafted Tropic Bird is scarce ever seen on land; and, except in the season of courtship, the common tropic bird seldom comes ashore. They live by fishing at large, and come to repose on the small isle of *Coin-de-Mire*, which is two leagues from the isle of France, and is the haunt of many other sea birds. It was in September and October that I found the nests of the tropic birds: each contained only two eggs of a yellowish white, marked with rusty spots. I was assured, that no more than one egg is found in the nest of the great tropic bird: and none of the species seem to be numerous*."

None

* "While I was seeking for them, chance led me to be spectator of a fight between the *martins* and the *Tropic Birds*: having been directed into a wood, where I was told that these birds had settled, I sat myself down at some distance from the tree marked, where I saw several *martins* collect: a short while after the Tropic Bird arrived to enter its hole; and the *martins* rushed upon it and attacked it on all sides, and though it has a very strong bill, it was obliged to flee; it made several attempts, which were not more

RED-SHAFTED TROPIC BIRD. 325

None of these three species or varieties, which we have just described, appears attached to any particular spot; often the two first or the two last are found together; and the Viscount de Querboënt says, that he saw all the three collected at the island of Ascension.

"more fortunate, though assisted at length by its mate. The martins, proud of their victory, did not quit the tree, and were on it when I left them." *Sequel of the Viscount de Querboënt's note.*

[A] Specific character of the *Phaeton Phœnicurus*: "It is of a very pale rose-colour; its bill, and its two middle tail-quills, are red."

None

The B O O B I E S.

LES FOUS*. *Buff.*

IN every well organized being, instinct displays itself by a chain of consistent habits, which all tend to its preservation; and this internal sense directs them to shun what is hurtful, and to seek what may contribute to the support, and even the enjoyment, of life. The birds that we are now to survey, have received from nature only half that faculty: large and strong, armed with a firm bill, provided with long wings, and with feet completely and broadly palmated, they are fitted to exercise their powers both in the air and in the water, they are invited to act and to live; yet they seem ignorant what exertions they should make, or what precautions they should observe, to escape that death which perpetually threatens them. Though diffused from one end of the world to the other, from the seas of the north to those of the south, they have nowhere learnt to distinguish their most dangerous enemy: the sight of man does not intimidate or discompose them. They suffer themselves to

* By the Portuguese settlers in India, they are called *Paxaros Bobos*, or the foolish birds.

be taken, not only at sea on the ships' yards *, but also at land, on the islets and coasts, where they may be felled by blows with a stick, in great numbers, one after another, and yet the stupid flock will make no effort to escape †. This insensibility to danger proceeds neither from resolution nor courage: since they can neither resist nor defend, still less can they attack, though their strength and their armour might render them formidable ‡. It originates, therefore, from stupidity and imbecility.

As

* These birds are called *Boobies* (fous) because of their great stupidity, their silly aspect, and their habit of continually shaking the head and shivering when alighted on ships' yards, or other parts, where they suffer themselves to be taken by the hand. *Feuillee*.—If the Booby sees a ship, either in open sea or near land, it will come to perch on the masts; and sometimes, if a person stretches out his hand, the bird will alight upon it. In my voyage to the islands, there was one which passed so often over my head, that I transfixed it with a half-pike. *Dutertre*.—These birds are not at all shy, either on land or at sea; they approach a vessel without seeming to fear any thing, when they chance to come in the way: the report of a fowling-piece, or any other noise, will not deter them. I have sometimes seen one of these solitary Boobies come to rove about the ship at evening, and to alight on the yards, where the sailors caught them without their shewing the smallest inclination to escape. *Observations communicated by M. de la Borde, King's physician at Cayenne*. See also Labat, *Nouveau Voyage aux îles de l'Amerique*: Paris, 1722, tom. vi. p. 481. Leguat, tom. i. p. 196.

† It is a very silly bird, and will hardly get out of peoples' way. *Dampier*.—In this island of Ascension, the Boobies are so numerous, that our sailors killed five or six with one blow of a stick. *Gennes*.—Our soldiers killed an astonishing quantity of them at the same island of Ascension. *Vicomte de Querboënt*.

‡ The Boobies are certain birds so called, because they suffer themselves to be caught by the hand: they pass the day on the rocks,

which

As the mental powers and the moral qualities of animals are derived from their constitution, we must attribute the excessive sluggishness and helpless security of the Boobies to some physical cause; and this, most probably, is the difficulty of putting their long wings in motion*.

But man is not their only foe; their want of courage exposes them to another enemy, which perpetually harrasses them. This is the frigate, or man-of-war bird. It rushes upon the Boobies which it descries, pursues them without intermission, and obliges them, by blows with its wings and its bill, to surrender their prey, which it instantly seizes and swallows†: for the silly,

which they never leave but when they go a-fishing; in the evening they retire to the trees, and, after they are once perched, I am persuaded they would not quit, though these were set on fire: and they will all suffer themselves to be taken without stirring from the spot; however they try to do their best in defence with their bill, but they cannot hurt a person. *History of the Buccaneers, 1686.*

* We shall see that the frigate itself, notwithstanding its vigorous wing, has the same difficulty in taking its flight.

† I had the pleasure to see the frigates give chase to the Boobies: when they retire in bodies at evening from the labours of the day, the frigates watch their return, and, rushing on, oblige them to scream for assistance, and to disgorge some fish, which they carry to their young. *Feuillee.*—The Boobies repair at night to repose on the island of Rodrigue, and the frigates, which are large birds, and so called because of the rapidity of their flight, wait for them every evening on the tops of the trees; they rise very high, and dart down upon them like a hawk upon his prey, not to kill them, but to make them disgorge; the Booby, struck in this way by the frigate, throws up a fish, which the latter snatches in the air: often the Booby screams, and discovers a reluctance to part with its booty; but the frigate scorns its cries, and, rising again, comes down with such a blow as to stun the poor bird, and compel an immediate surrender. *Leguat.*

cowardly

cowardly Boobies disgorge at the first attack, and return to seek new prey, which they often lose by a second piracy *.

The Boobies hover above the surface of the water, scarce moving their wings, and drop on the fish the instant it emerges †. Their flight, though rapid and well supported, is greatly inferior to that of the frigate. Accordingly, they do not roam so far, and their appearance is regarded by navigators as a pretty certain sign of the nearness of some land ‡. Yet several of these

* Catesby describes somewhat differently the skirmishes of the Booby and its enemy, which he calls the *pirate*. "The latter," says he, "subsists entirely on the spoils of others, and particularly of the Booby. As soon as the pirate perceives that it has caught a fish, he flies furiously against it, and obliges it to dive under water for safety; the pirate not being able to follow it, hovers above the water till the Booby is obliged to emerge for respiration, and then attacks it again while spent and breathless, and compels it to surrender its fish; it now returns to its labours, and has to suffer fresh attacks from its indefatigable enemy."

† Ray.

‡ The Boobies do not go very far to sea, and seldom lose sight of land. *Forster*.—A few days after our departure from Java, we saw Boobies about the ship for several nights together; and as these birds go to roost on land in the evening, we conjectured that there was some island near us; perhaps it was the island of Selam, whose name and position are very differently marked on the charts. *Cook*.—Our latitude was 24° 28' (on the 21st May 1770, near New Holland); we had found on the preceding days several sea birds, called Boobies, but we had not that sight to-day. On the night of the 21st, there passed near the ship a small flock flying to the north-west; and in the morning, from an hour before sun-rise to half an hour after, there were continual flights that came from the north north-west, and disappeared toward the south south-east; we saw none that

took

cowardly

these birds frequent our northern coasts *, and occur in the remotest and most sequestered islands in the midst of the ocean †. There they live in companies, with the gulls, the tropic birds, &c. and the frigate, their inveterate foe, has followed them to their retreats.

Dampier gives a curious account of the hostilities between the man-of-war birds and the Boobies, in the Alcrane islands, on the coast of Yucatan. "These birds were crowded so thick that I could not," he says, "pass their haunt without being incommoded by their pecking. I observed that they were ranged in pairs, which made me presume that they were male and female. When I struck them, some flew

took another direction, which led us to suppose, that at the bottom of a deep bay lying south of us, there was a lagoon, or shallow river, whither these birds repaired to seek their food during the day, and that on the north of us there was situated some island to which they retired. *Cook*.—*Note*, We must confess that some voyagers, and among others Father Feuillée, say that Boobies are found several hundred leagues at sea; and that Captain Cook himself seems to reckon them, at least in certain circumstances, as more certain tokens of the proximity of land than the frigates, with which he classes them in the following passage. "The weather was pleasant, and every day we saw some of the birds which are esteemed to be signs of nearness of land, such as Boobies, frigates, tropic birds, and gulls. We believed that they came from the island of St. Matthew or Ascension, which we had left pretty near us."

* See the article of the Gannet.

† At Rodriguez, *Leguat*: at Ascension, *Cook*: at the Calamian islands, and at Timor, *Gemelli Careri*: at Sabuda in New Guinea, and at New Holland, *Dampier*: in all the islands scattered under the southern tropic, *Forster*: in the Great Antilles, *Feuillée*, *Labat*, *Dutertre*, &c.: in the Bay of Campeachy, *Dampier*.

" away,

"away, but the greater number remained, and
"would not stir for all I could do to rouse them.
"I remarked also, that the man-of-war birds
"and the Boobies always placed sentinels over
"their young, especially when they went to sea
"for provision. Of the man-of-war birds, many
"were sick or maimed, and seemed unfit to
"procure their subsistence. They lived not
"with the rest of their kind, whether they
"were expelled from the society, or had separated
"from choice: these were dispersed in
"different places, probably that they might have
"a better opportunity of pillaging. I once saw
"more than twenty on one of the islands
"sally out from time to time into the open
"country, to carry off booty, and they returned
"again almost immediately. When one surprised
"a young Booby that had no guard, he
"gave it a violent peck on the back to make it
"disgorge, which it did instantly: it cast up
"one or two fish about the bulk of one's hand,
"which the old man-of-war bird swallowed still
"more hastily. The vigorous ones play the
"same game with the old Boobies which they
"find at sea. I saw one myself which flew right
"against a Booby, and with one stroke of its
"bill, made him deliver up a fish which he had
"just swallowed. The man-of-war bird darted
"so rapidly as to catch it in the air before it
"could fall into the water."

The Boobies resemble most the cormorants in
their

their shape and organization, except that their bill is not terminated in a hook, but in a point slightly curved: they differ also, because their tail projects not beyond their wings. They have their toes connected by a single piece of membrane; the nail of the mid-one is serrated on the inside: their eyes are encircled by a naked skin; their bill is straight, conical, and somewhat hooked at the end, and the sides are finely indented; the nostrils are not apparent, and their place is occupied only by two hollow channels. But the most remarkable property of the bill is, that the upper mandible is articulated, as it were, and formed of three pieces joined by two sutures; the first is traced near the point, which therefore appears like a detached nail; the second is situated at the root of the bill near the head, which enables the bird to raise the tip of its upper mandible two inches, without opening the bill*.

These birds utter a loud cry, partaking of that of the raven and of the goose; and this is heard particularly when they are pursued by the frigate, or when, assembled together, they are seized by some sudden panic†. In flying they stretch out the neck, and display the tail. They cannot
begin

* "What is most remarkable in these birds, the upper mandible, two inches below the mouth, is jointed in such manner that it can rise two inches above the lower mandible, without the bill being opened." *Cassidy*.

† "We had been hunting goats at night (in the island of Ascension); the reports of the piece which we fired had frightened
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THE COMMON BOOBY.

begin their motion but from some lofty station, and therefore they perch like cormorants. Dampier remarks, that in the isle of Aves they breed on trees, though in other places they nestle on the ground, and always a number in the same haunt; for a community, not of instinct but of weakness, seems to collect them together. They lay only one or two eggs. The young ones continue long covered, for the most part, by a very soft and white down.—The other particulars will best appear in the enumeration of their species.

"ened the Boobies in the neighbourhood: they all screamed together, and the rest replied at short distances, which made a hideous "din." *Note communicated by the Viscount de Querboënt.*

The COMMON BOOBY.

FIRST SPECIES

Pelecanus-Sula. Linn. and Gmel.

Sula. Briss.

Plancus Morus. Klein.

THIS bird, which seems to be most common in the Antilles, is of a middle size between the duck and the goose: its length, from the end of the bill to that of the tail, is two feet five inches, and a foot eleven inches to the extremities of the nails: its bill is four inches and

and a half, and its tail is near ten; the naked skin which encircles the eye is yellow, and so is the base of the bill, whose point is brown; the legs are straw-coloured*; the belly is white, and all the rest of the plumage is brown cinereous.

Simple as this garb is, it is insufficient, as Catesby observes, to characterize the species, so many are the individual varieties which it contains. "I observed," says he, "one that had "a white belly and a brown back; another, "whose breast and belly were white, and others "which were entirely brown." Some travellers seem to denominate this species the *fulvous bird*†. The flesh is black, and has a marshy flavour; yet the sailors and adventurers of the Antilles often fed on it. Dampier relates, that a small French fleet, being cast on the isle of Aves, partly subsisted on these birds, and made such consumption of them, that the number there has since been much diminished.

* Catesby.

† The birds which the French in the Antilles call *sauvies*, because of the colour of their back, are white under the belly; they are of the bulk of a water-hen, but are usually so lean that their plumage is the only part of them the least valuable: they have the feet of ducks, and the pointed bill of woodcocks; they live on small fish, like the frigates, but they are the most stupid of the birds, either at sea or on land, in the Antilles; since, whether that they easily tire on wing, or that they take the ships for floating rocks, as soon as they perceive one, especially if towards night, they immediately come to alight upon it, and are so silly as to suffer themselves to be taken by the hand. *Histoire Naturelle & Morale des Antilles*; Rotterdam, 1658, p. 148.

They

They are found in great numbers not only on the isle of Aves, but in that of Remire, and especially at the *Grand-Connétable*, a rock shaped like a sugar-loaf, rising apart in the sea, within sight of Cayenne*. Multitudes also occur on the islets which lie along the shores of New Spain and Caracca†. And the same species seems to be met with on the coast of Brazil‡, and on the Bahama islands, where, it is asserted, they lay every month of the year two or three eggs, or sometimes only one, on the naked rocks§.

* Barrere, *France Équinoxiale*, p. 122.

† What makes these birds and many others so extremely numerous on these shores, is the incredible swarms of fish which attract them: a person can scarce let down into the water a line with twenty or thirty hooks, but he finds, on drawing it up, a fish hanging from each.

‡ On these islands (of St. Anne, on the coast of Brazil) numbers are found of large birds, called Boobies (*fous*) because they allow themselves to be easily caught: in a short time we took two dozen... Their plumage is gray; they are skinned like hares. *Lettres Édifiantes*, xv. *Recueil*, p. 339.

§ Catelby.

[A] Specific character of the Booby, *Pelecanus-Sula*: "Its tail is wedge-shaped, its body whitish, its primary wing-quills black at the tip, its face red."

The WHITE BOOBY.

SECOND SPECIES.

Pelecanus-Piscator. Linn. and Gmel.*Sula Candida.* Briss.*The Lesser Gannet.* Lath.

WE have remarked, that there is much diversity of white and brown in the preceding species, yet we cannot class this with it; the more so as Dutertre, who saw both alive, distinguished them from one another. They are indeed very different, since what is white in the one is brown in the other; viz. the back, the neck, and the head, which is besides rather smaller. It appears also to be less stupid; it seldom perches on trees, and still less does it suffer itself to be caught on the ships' yards; yet it inhabits the same places with the preceding, and both are found on the island of Ascension. "There are," says the Viscount de Querhoënt, "in this island, thousands of common Boobies; the white are less numerous; both kinds are seen perched upon heaps of stones, generally in pairs. They are found at all hours, and will never stir till hunger obliges them to fish. Their general resort is on the windward side of the island."

" island. They may be approached in broad
 " day, and caught even by the hand. There are
 " Boobies also which differ from the preceding :
 " when at sea, in the latitude of $10^{\circ} 36'$ north,
 " we saw some whose head was entirely
 " black *."

* Captain Cook found White Boobies on Norfolk island.

[A] Specific character of the Lesser Gannet, *Pelecanus Piscator* :
 " Its tail is wedge-shaped ; its body white ; all its wing-quills
 " black ; its face red."

The G R E A T B O O B Y.

T H I R D S P E C I E S.

Pelecanus Bassanus, var. 1. Linn. and Gmel.
Sula Major. Briss.

THIS bird is the largest of its genus, being
 equal to the goose, and its wings measur-
 ing six feet across : its plumage is deep brown,
 sprinkled with small white spots on the head,
 with broader ones on the breast, and with others
 still broader on the back ; the belly is dirty
 white. The colours are more vivid in the male
 than in the female.

This large bird is found on the coasts of
 Florida, and on the great rivers of that country.

VOL. VIII.

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" It dives," says Catesby, " and remains a considerable time under water, where I imagine it chances on sharks and other voracious fish, which often maim or destroy it ; for I several times found these birds wounded or dead on the beach."

An individual of this species was taken in the neighbourhood of the city of Eu, on the 18th of October, 1772. No doubt it had been surprised far at sea by rough weather, and driven by the violence of the wind upon our coasts. The person who found it had only to throw his coat over it : it was kept some time ; at first it would not stoop to take a fish, but required it to be held as high as its bill. It sat always squat, and was averse to motion ; but after being accustomed to live on land, it walked and became familiar ; it even importunately followed its master, making at intervals a shrill raucous cry *.

* Extract of a letter from the Abbe Vincent, professor in the college of the city of Eu, inserted in the *Journal de Physique* for June, 1773.

The LITTLE BOOBY.

FOURTH SPECIES.

Pelecanus Parvus. Gmel.

The Lesser Booby. Lath.

THIS is the least of the Boobies known: its length, from the end of the bill to that of the tail, is scarcely a foot and half; the throat, the stomach, and the belly, are white, and all the rest of the plumage is blackish. It was sent to us from Cayenne.

The LITTLE BROWN BOOBY.

FIFTH SPECIES.

Pelecanus Fiber. Linn. and Gmel.

Fiber Marinus. Feuillee.

Larus Piscator Cinereus. Klein.

Sula Fusca. Briss.

THIS bird differs from the preceding, being entirely brown; and though it is also larger, it equals not the common Booby. We

therefore range these species separately, till new observations inform us whether they ought to be joined. Both of them inhabit the same places, and particularly Cayenne and the Caribbee islands.

[A] Specific character of the *Pelecanus Fiber*: "Its tail is wedge-shaped; its body dusky; all its wing-quills blackish; its face red."

The SPOTTED BOOBY.

SIXTH SPECIES.

Pelecanus Maculatus. Gmel.

THE colours and bulk of this bird might refer it to the third species, did it not differ in the excessive shortness of its wings. Indeed, we should almost doubt, whether it belonged to the Boobies, but for the characters of its bill and feet. It is equal to the great diver, and as in it, the ground of the plumage is blackish brown, wholly spotted with white, more delicately on the head, and broader on the back and wings; the stomach and belly are waved with brownish, on a white ground.

[A] Specific character of the *Pelecanus Maculatus*: "It is brown-spotted with white; below white, waved and spotted with brown; its bill, its wing-quills, its tail, and its feet brown."

The G A N N E T.

LE FOU DE BASSAN. *Buff.**Pelecanus Bassanus.* Linn. and Gmel.*Sula Bassana.* Briff.*Anser Bassanus.* Sibbald, Ray, Charleton, &c.*Anser Bassanus, vel Scoticus.* Gefner, Aldrov. &c.*Sula Heieri.* Clusius and Will.*The Solan Goose* *. Will. and Alb.

THE Bass-isle is a stupendous rock in the Firth of Forth, not far from Edinburgh. It is the resort of these large and beautiful birds, which have been reckoned peculiar to it †: but Clusius and Sibbald assure us, that it occurs also on the Craig of Ailfa ‡ in the Firth of Clyde, and in the Hebrides § and the Feroe islands ||.

This bird is as large as a goose; it is near three feet long, and more than five feet across

* In Norwegian *Sule*, *Hav-Sule*.

† Ray.

‡ Sibbald.

§ Some persons assure us, that these Boobies are at times driven by adverse winds on the coasts of Brittany, and that one was seen even in the vicinity of Paris.

|| Hector Boece, in his description of Scotland, says, that these birds also nestle on the Hebrides; but what he adds, that for this purpose they bring as much wood as to supply the inhabitants, seems fabulous; especially as the Gannets of the Bass lay, like the other boobies of America, on the naked rock.

the wings: it is entirely white, except the primaries of the wing, which are brown or blackish, and the back of the head, which is tinged with yellow *: the cere is of a fine blue, and also the bill, which extends six inches, and opens so wide as to admit a large mackerel; nor does this enormous morsel always satisfy its voracity. M. Baillon sent us a Gannet that was taken in open sea, and which had choaked itself in swallowing a very large fish †. Near the Bas, and at the Hebrides, they subsist generally on herrings. Their flesh contracts a fishy taste: but the young ones are always very fat ‡; and persons descend among the crags to rob the nests §. The old ones might easily be felled with sticks or stones ||, but they are unfit for eat-

* I am inclined to believe that this is a mark of age; this yellow spot is of the same nature with that on the lower part of the neck of the spoon-bills: I have seen some wherein it was golden; the same thing happens to white hens, which turn yellow as they grow old. *Note communicated by M. Baillon.*—Ray is of the same opinion; and Willughby relates, that the young ones are at first marked with brown or blackish on the back.

† Sent from Montreuil-sur-mer, by M. Baillon, December, 1777. The story related by Gefner is fabulous, that, on seeing another fish, it disgorges the one which it had just swallowed.

‡ Gefner says, that the Scotch make an excellent kind of ointment of the fat of these birds.

§ "The art of cookery," says Sir Robert Sibbald, "cannot form a dish of such delicate flavour, and combining the tastes of fish and flesh, as a roasted Solan goose; and the young grown ones are deservedly esteemed delicacies with us, and sell at a high price."

|| *Note communicated by James Bruce, Esq; 30th of May, 1774.*

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ing*. They are as silly as the other boobies†.

They breed in all the clefts of the Basfs, and lay but one egg‡. The people say that they hatch it standing on one foot§, a notion suggested probably by the breadth of its sole||. It is widely palmated, and the middle and outer toes are each near four inches long, and all the four are connected by an entire piece of membrane: the skin does not adhere to the body; it is connected to it only by small bundles of fibres placed at equal distances, such as one or two inches, and capable of being extended as much; so that the skin may be drawn out like a membrane, and inflated like a bladder. The bird, no doubt, thus swells itself to diminish its specific gravity, and facilitate its flight; yet no ducts can be traced from the thorax to the cuticle: but perhaps the air penetrates it through the cellular texture, as in many other birds. This observation, which will certainly apply to

* "It is a bird excessively fœtid; in preparing the specimen for my cabinet, my hands retained the smell more than a fortnight; and though I dipt the skin in alkaline lye, and several times fumigated it with sulphur in the course of two years, its odour still adheres to it." *Note communicated by M. Baillon.*

† *In domibus nutrita stupidissima avis.* Sibbald.

‡ Sibbald.

§ Mr. Bruce.

|| Hence, it is alledged, they received the name of *Sole-an-geese*; but Martin informs us, that this word is of Irish or Erse derivation, and signifies quick-sighted; these birds being noted for the bright lustre of their eyes.—T.

all the species of boobies, was made by M. Daubenton the younger, on a Gannet, sent fresh from the coast of Picardy.

The Gannets arrive in spring on the islands of the north, and retire in autumn *, and advance farther south. Perhaps, if their migrations were well known, it would be found, that they join the other species of boobies on the coasts of Florida; the general rendezvous of all the birds which descend from the boreal regions, and have vigour of wing sufficient to traverse the Atlantic ocean.

• Sibbald.

[A] Specific character of the Gannet, *Pelecanus Bassanus*: "Its tail is wedge-shaped; its body white; its bill, its primary wing-quills black; its face blue." It has a small dilatable pouch under its chin, able to contain five or six herrings, which, in the breeding season, it carries to its family. Its legs and toes are black, with a stripe of fine velvet green on the fore part: the tail contains twelve sharp taper quills. The egg is white, and rather smaller than that of a common goose: if it be removed, the bird will lay another; and if this be equally unfortunate, she will even lay a third. The nest is large, and composed of substances that float on the water, as sea-weeds, fog, shavings, &c. It is very probable, that the Gannets attend the progress of the herrings; the fishermen reckon them a sure sign of the approach of the shoal. In December, these birds are frequently seen near Lisbon, diving for sardines, a kind of pilchards. They descend from a vast height, and plunge many fathoms under water. In Scotland they are usually called *Solan-geese*; in Cornwall and Ireland *Gannets*; and in Wales *Gan*. The inhabitants of St. Kilda, we are assured by Martin, take often 22,600 of the young birds annually, besides a prodigious number of eggs. These spoils are the chief subsistence of these hardy islanders, and they store up their provisions in pyramidal stone buildings, covering them over with peat-ashes. The Craig of Ailsa resembles much in appearance the Bass-isle: of the latter,

latter, we have an elegant description, by the immortal discoverer of the circulation of the blood, Dr. Harvey.

I shall take the liberty of subjoining a translation of it: "There
 " is a small island which the Scotch call the *Bass*, not above a mile
 " in circuit. In the months of June and July, the surface of this
 " island is so strewed with nests, and eggs, and young birds, that a
 " person can hardly set his foot without treading on them. And so
 " vast is the multitude of those which fly over head, that like clouds,
 " they darken the sun and the sky; and such is their clangorous
 " noise, that you can scarce hear the voice of your companions.
 " If from the summit of the lofty precipice, you look towards the
 " sea which spreads below, you will perceive, wherever you turn
 " your eyes, birds innumerable of various kinds, swimming and
 " hunting for their prey. If sailing round, you survey the im-
 " pending cliff, you will see in every crag and fissure of the indent-
 " ed rock, birds of all sorts and sizes, which would out-number the
 " stars that appear in a clear night. If from a distance you be-
 " hold the flocks roving about the island, you would imagine them
 " to be a vast swarm of bees."—*De Generat. Animal. Exer. 2.*

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The F R I G A T.

LA FREGATE. *Buff.**Pelecanus Aquilus.* Linn. and Gmel.*Fregata.* Briss.*Fregata Avis.* Ray, Will, &c.*The Man-of-War Bird.* Brown, Damp, and Sloane.*The Frigat Bird.* Alb. and Penn.*The Frigat Pelican.* Lath.

THE steadiness and rapidity with which this bird moves through the air, have procured it the name of *Frigat*. It surpasses all the winged sailors in the boldness, the vigour, and the extent of its flight; poised on wings of prodigious length, which support it without perceptible motion, it swims gently through the tranquil air, waiting to dart on its prey with the rapidity of a flash: but if the atmosphere is embroiled with tempests, the Frigat, nimble as the wind, ascends above the clouds, and stretches beyond the region of storms*. It journeys in all directions, and either mounts upwards or glides horizontally; and it often roams to a distance of several hundred leagues†: and

* Ray.

† *Idem.*—"There is no bird in the world that flies higher, longer, or more easily, and which roves farther from land. . . . It is found

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THE FRIGAT PELICAN.

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and these immense excursions are performed by a single flight; and as the day is insufficient, it pursues its route during the darkness of the night, and never halts on the sea, but when invited by the abundance of prey *.

The flying-fishes, whose columns are pursued by the bonettoes, dolphins, &c. when driven to extremity, spring out of the water, but escape not the Frigats: it is in quest of these fishes that they roam so far from the land; they discern at a vast distance † the progress of their phalanxes, which sometimes are so compacted as to make a rippling, and to whiten the face of the ocean. Then the Frigats shoot with downward flight, and bending along the surface of

“found in the midst of the ocean, three or four hundred leagues from land; which shows its prodigious strength and its surprising lightness: for it cannot rest on the water like the water-fowl, since its feet are not calculated for swimming, and its wings are so large, that they require room to begin their motion; if therefore it fell on the water, its efforts would be fruitless, and it could never rise again. We may hence conclude, that as it is found three or four hundred leagues from land, it must describe a track of seven or eight hundred leagues before it can halt.” Labat, *Nouveaux Voyages aux îles de l’Amérique*; Paris, 1722, tom. vi.

* “In the evening we saw several birds called Frigats; at midnight I heard others about the vessel; and at five o’clock in the morning we perceived the island of Ascension.” Wallis.

† “The dolphins and bonettoes pursued the shoals of flying fish, as we have observed in the Atlantic Ocean; while several large black birds with long wings and a forked tail, usually called Frigats, rose very high in the air, and dashing down with surprising swiftness on the fish which they perceived swimming, never failed to strike their prey.” Cook.

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the water *, they snatch the fish, seizing it with the bill or talons, and often with both at once; according as it scuds on the surface, or springs into the air.

It is between the tropics only, or a little beyond them †, that we find the Frigate in the seas of both continents ‡. He maintains a sort of empire over the birds of the torrid zone: he obliges many, such as the boobies, to provide for him; and striking them with his wing, or biting them with his hooked bill, he constrains them to disgorge their prey, which he instantly catches §. The hostilities which he commits have

* “ Though the Frigate rises to a vast height in the air, and “ often beyond the reach of our sight, it notwithstanding descends “ clearly where the dolphins are in pursuit of the flying fish: it “ then shoots down like lightning, not quite to the water, but when “ it has come within ten or twelve fathoms, it makes a great bend, “ and sinks gradually till it raze the sea, and catches the little fish “ either while flying or while in the water, with its bill or its talons, “ and often with both together.” *Duterte.*

† “ In 30° 30' south latitude, we began to see Frigats.” *Cook.*—
“ In 27° 4' south latitude, and 103° 56' west longitude, about the “ beginning of March, we met with great numbers of birds, such as “ Frigats, tropic birds, &c.” *Idem.*

‡ At Ceylon; in the run between Madagascar and the Maldives; at the island of Ascension; at Easter island; at the Marquesas; at Otaheite, and in all the low islands of the southern Archipelago; on the coast of Brazil, where it is called *caripira*; at Caracca; at the isle of Aves, and in all the Antilles,

§ “ These birds, called Frigats, hunt the boobies; they make “ them rise above the rocks where they are perched, and pursue “ them, striking with the ends of their wings; the boobies, the “ better to escape their enemies, disgorge what fish they have “ taken; and the Frigats, which want nothing else, catch the spoils

have led failors to bestow on him the appellation of *Man-of-War bird* *. He has the audacity even to set man at defiance: "On landing at the island of Ascension," says the Viscount de Querhoënt, "we were surrounded by a cloud of Frigats. With a blow of my cane I knocked down one, which attempted to snatch a fish out of my hand: at the same time many of them flew a few feet above the kettle which was boiling ashore, and endeavoured to carry off the flesh, though a part of the ship's company attended it."

This temerity of the Frigat proceeds as much from the force of its arms, and the boldness of its flight, as from its voracity. It is fitted by nature for war: its talons are sharp, its bill terminates in a very pointed hook, its legs are short and strong, its flight is rapid, its sight acute: all these qualities seem to mark an analogy to the eagle, and to constitute it the tyrant of the air at sea †. But its structure is calculated for the watery element, and, though it seldom or never swims, its four toes are connected by a single scalloped membrane. In this respect, it ap-

"as they are dropt, and before they reach the water." *History of the Buccaneers*.—"According to Oviedo, the Frigats wage the same war against the pelicans, when these repair to the Bay of Panama, to fish for sardines." *Ray*.

* Dampier.

† Hence, in the Linnæan system, the Frigat is denominated *Pelecanus Aquilus*, or Eagle Pelican.

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proaches the cormorants, the boobies, and the pelicans, which may be regarded as perfect palmipeds. The bill of the Frigat is peculiarly calculated for rapine, since it terminates in a sharp hooked tip, and yet differs essentially from that of the birds of prey, being very long, the upper mandible somewhat concave, and the hook, placed quite at the point, seems to form a detached piece, as in the bill of the boobies, which it resembles by its sutures and by the want of external nostrils.

The Frigat is not larger than a hen, but its wings extend eight, ten, and even fourteen feet. This prodigious expansion enables it to perform its distant excursions, and transports it into the midst of the ocean, where it is often the only object between the sky and the water that gratifies the longing eyes of the mariner *; but this excessive length of wings has also its inconvenience; and, like the booby, the Frigat can hardly rise after it has alighted, so that when surprized in that situation it may be felled to the ground †. A cliff or the summit of a tree,

* "We were accompanied with no bird in our route; a white booby or a Frigat appeared now and then at a great distance " (between 15° and 20° south latitude)." *Cook*.

† "I went one of these last days to hunt Frigats on their islet at the extremity of Guadaloupe; we were three or four persons, and in less than two hours we took three or four hundred; we surprized the grown ones on the branches, or in their nest, and as they had great difficulty in taking wing, we had time to stun them with
" the

tree is required, and even then it costs great effort to mount on wing *. We may suppose that all the palmated birds which perch have no object in view but to commence more easily their flight; for that habit is not suited to the structure of their feet, and it is only on elevated points that they can display their enormous wings and exert their pinions.

Hence the Frigats retire to settle on the high cliffs or woody islets, to breed undisturbed †. Dampier remarks, that they build their nests on trees, in sequestered spots near the sea; they lay one or two eggs, which are white, with a carnation tinge, and having small dots of crimson. The young ones are at first covered with a light gray down; their feet are of the same colour, and their bill is almost white ‡: but this colour afterwards changes, and the bill grows

"the blows of sticks." *Dutertre*.—"They leave their eggs with difficulty, and suffer themselves to be knocked down with sticks: I have often been witness and actor of this butchery." *M. de la Borde*.

* *Dutertre*.

† "The sea rocks, and the little desert isles, are the retreats of these birds; and in such sequestered spots they nestle." *Hist. Nat. & Mor. des Antilles*.—"These birds had very long possessed a little isle in the extremity of Guadeloupe, to which all the Frigats of the neighbourhood came to repose at night, and nestle in the season. It was called the *islet of Frigats*, and still bears that name, though they have changed their retreat; for in the years 1643 and 1644, many persons hunted them so closely, that they were obliged to forsake the islet." *Dutertre*.

‡ Observation made by the Viscount de Querhoënt at the island of Ascension.

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red or black, and bluish in the middle; the same alteration takes place in the toes. The head is pretty large, and flat above; the eyes are large, black and brilliant, and encircled by a bluish skin *. Under the throat of the adult male, there is a large fleshy membrane of bright red, more or less inflated or pendulous. No person has distinctly described these parts; but if they belonged exclusively to the male, they might bear some analogy to the caruncle of the turkey-cock, which swells and reddens, when the bird is stimulated by love or rage.

The Frigats are distinguished afar at sea, not only by the excessive length of their wings, but by the very forked shape of their tail †. The whole plumage is commonly black with a bluish gloss, at least that of the male ‡. Those which are brown ||, as the *little Frigat* figured by Edwards, seem to be females. Among the number of Frigats seen by the Viscount de Querhoënt at the island of Ascension, and which were all of the same size, some appeared entirely black, others of a deep black on the upper sur-

* Feuillée.

† The Portuguese call the Frigat *Rabo Forcado*, on account of its very forked tail.

‡ Ray.

|| "The feathers of the back and of the wings are black, thick, and strong; those which cover the stomach and thighs are more delicate, and not so black. There are some which have all the feathers brown on the back and on the wings, and gray under the belly; it is said that the latter are females, or perhaps young ones." *Labat*.

face of the body, with the head and belly, white. The feathers on their neck are so long, that the inhabitants of the South-Sea Islands work them into bonnets *. They set great value on the fat, or rather oil, extracted from these birds, on account of its supposed virtue in curing rheumatisms and torpors †.

This bird has, like the booby, the space round the eye naked; and also the nail of the mid-toe indented within. Thus the Frigats, though born the persecutors of the boobies, are related to them by consanguinity: sad example in nature, of animals, which, like ourselves, find often the most inveterate foes among their kindred !

* Most of the men at Easter Island wore on their head a fillet of grass, decorated with the long black feathers found on the neck of Frigats; others had enormous bonnets of the feathers of the brown gull. *Cook*.

† The oil or fat of these birds is a sovereign remedy in sciatic complaints, and for all others that originate from cold; it is esteemed a precious medicine in the West Indies. *Dutertre*.—The Buccaneers extract this oil, which they call *the oil of Frigats*, by boiling these birds in great cauldrons; it sells very dear in our islands. *M. de la Borde*.—The fat should be warmed, and rubbed well upon the part affected, in order to open the pores, and spirit of wine should be mixed with it when the application is made: many people have received a complete cure, or at least great relief, from the remedy which I here mention on the credit of another, not having myself had an opportunity of putting it in practice. *Labat*.

[A] Specific character of the Frigat, *Pelecanus Aquilus*: "Its tail is forked, its body black; its bill red, its orbits black."

The GULLS and the MEWS.

LES GOELANDS *et* LES MOUETTES. *Buff.* *

THESE two names, sometimes conjoined, sometimes separated, have hitherto served rather to confound than to discriminate the species comprehended in one of the most numerous families of the aquatic birds. Many naturalists have termed those *Gulls*, which others call *Mews*, and some have considered these two appellations as synonymous. But of all expressions in language, some traces must remain of their origin, or some marks of their differences: and I conceive that *Gull* and *Mew* correspond to the Latin words *larus* and *gavia*. I am persuaded also, that the Gulls properly include the larger, and the Mews the smaller species. Nay, we may discover vestiges of the same division among the Greeks; for the word *κερκος*, which occurs in Aristotle, Aratus, and other authors, seems to denote a particular kind of Gulls. Suidas and the scholiast of Aristophanes render *κερκος* by

* In Greek *Λαρος* and *Κερκος*: in Eustathius *Κηξ*; and Lycophron gives the old ones the name *Καυηξ*, which seems to imitate their cry: in Latin *Larus* and *Gavia*: in German *Mew*: in Greenlandic *Akpa* or *Naviat*.

larus;

larus; and Gaza might have given the same version in his edition of Aristotle *, had he not followed the conjecture of Pierius, that Virgil, in a passage of his Georgics, translated literally the verses of Aratus, and substituted *fulica* for the Greek term. But if the *fulica* of the ancients be the same with our coot, the property ascribed to it by the Roman poet, of playing on the beach previous to a storm †, would be without foundation ‡, since that bird does not live on the sea. The character which Aristotle gives of his *κεπφος*, that it swallows the salt spume, and is caught by that bait, can apply only to a voracious bird, such as the Gull or the Mew. Aldrovandus accordingly concludes, after comparing these circumstances, that the *λαρος* in Aristotle is generic, and that the *κεπφος* is specific, or rather belongs to some subordinate species of the same genus. But a remark which Turner has made on the voice of these birds, seems to throw us again into uncertainty: he conceives that the word *κεπφος* is imitative of that of the Mew, which usually concludes its shrill cries by a low, short accent, or a sort of sneezing, *keph*; while

* Lib. ix. 135.

† ——— *cumque marinae*

In sicco ludunt fulicae — Virg. Georg. i. 362.

‡ The epithet which Cicero gives to the coot, in translating the same idea of Aratus, applies not to that bird, but agrees well with the gull:

*Cana fulix itidem fugiens è gurgite ponti,
Nuntiat horribiles clamans instare procellas.*

W S.

Buff. *

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the gull terminates its scream by a deeper tone, *cob*.

The Greek name *καπρος* will correspond then, in our division, to the Latin *gavia*, and will properly denote the inferior species, or *the Mews*: while the appellation *λαρος*, or *larus*, will signify the larger species, or *the Gulls*. And to fix a term of comparison in this scale of magnitude, we shall reckon all those birds *Gulls*, which exceed a duck in bulk, and measure eighteen or twenty inches from the point of the bill to the end of the tail; and all under that dimension we shall denominate *Mews*. It would thence follow, that the sixth species, which Brisson calls the *first Mew*, ought to be ranged with the *Gulls*, and that many of the *Gulls* in the Linnæan system must be classed with the *Mews*: but before we descend into the detail, we shall exhibit the general characters and habits common to the whole genus.

All the *Gulls* and *Mews* are alike voracious and clamorous; they might be styled the vultures of the sea: they devour carrion of every kind which floats on the surface, or is cast on shore. As cowardly as they are gluttonous, they attack only weak animals, and vent their fury on dead bodies. Their ignoble port, their importunate cries, their edged and hooked bill, present the hateful picture of birds sanguinary and basely cruel. They fight rancorously together on the scene of carnage; and even when they

are shut up, and their ferocious humour is soured by captivity, they wound each other without apparent motive, and the first from which blood is drawn falls a victim to the rest; for their fury then rises to a pitch, and they tear in pieces the wretch which they had wounded without cause *. This excess of cruelty is scarce seen but in the large species; but all of them, when at liberty, continually watch an opportunity to steal the food or prey of their companions. Every thing is acceptable to their voracity †: fish, whether fresh or putrid; bloody flesh, recent or tainted; shell-fish, and even bones; all digest in their stomach ‡. They swallow the bait and the hook; they dart with such violence as to transfix themselves on the point where the fisherman places the herring or pilcher as a snare. Nor is this the only way to allure them; Oppian asserts, that if a board be painted with figures of fish, these birds will dash against it.—But ought not

* *Observation made by M. Baillon, of Montreuil-sur-mer.*

† “I have often given my Mews buzzards, ravens, new-born kittens, rabbits, and other dead animals; they devoured them as greedily as they would do fish: I have still two which can easily swallow staves and sea-larks without plucking a feather; their throat is a gulph which devours every thing.” *Note communicated by M. Baillon.*

‡ “They disgorge such substances when they have plenty of other food; but when they are pinched for want, the whole remains in their stomach, and dissolves by the heat. Extreme voracity is not the only character in which these birds approach the vultures and the other ravenous birds; the Mews suffer hunger with equal patience: I saw one live nine days beside me, without tasting food.” *Note of the same observer.*

these portraits to be as perfect as those of the grapes by Parrhasius?

Both the Gulls and the Mews have a long cutting bill, flat on the sides, with the point fortified and bent into a hook, and a protuberant corner at the lower mandible. These characters are more apparent and decided in the Gulls, but yet occur in all the species of Mews: by these they are distinguished also from the terns, which have neither the hook on the upper mandible, nor the protuberance on the lower; not to mention that the largest of the terns is inferior to the least of the Mews. The Mews have their tail not forked but entire: their leg, or rather their tarsus, is very high; and they would have the tallest legs of all the palmated birds, did not those of the flamingo, the avocet, and the long-shank still exceed them, whose structure is so misproportioned that they might be regarded as monstrous species. All the Gulls and Mews have three toes connected by an entire membrane, and the hind toe detached, but very small: their head is large, and its carriage ungraceful, being sunk almost between the shoulders, whether they walk or repose. They run swiftly on the beach, and fly still better above the waves: their long wings, which when closed exceed the tail, and the quantity of feathers with which their body is clothed, make them very light*.

* We have a proverb, *You are as light as a Mew.* Martens.

They

They have also a very thick down *, which is of a bluish colour, especially on the stomach. They are hatched with that down, but the other feathers are late in growing; and they acquire not completely their colours, to wit, the fine white of the body, and the black or bluish gray on the mantle, till after several moultings, and in their third year. Oppian seems to have known this progress of their colours; for he says that these birds, as they grow old, become blue.

They keep in flocks on the sea-shores; some running, some flying, and others alighting; the beach and the downs seem quickened by their numbers and their confused motions, and resound incessantly with their noisy cries. In general, no birds are more common on our coasts, and they are found an hundred leagues at sea. They frequent the islands and maritime countries of every climate. Navigators meet with them in all parts of the globe †. The larger species seem attached

* Aldrovandus says, that in Holland the down of the Mew is much used; but it would be hard to believe what he adds, that this down heaves up at full moon, by a sympathetic concord with the swelling of the tide.

† The Gulls are as common in Japan as in Europe. *Kämpfer*.—There are different kinds of them at the Cape of Good Hope, whose cry is like that of the European Gulls. *The Viscount de Querboënt*.—As long as we were on this bank, which extends as far as Cape Needles (off Madagascar) we saw Gulls. *Cook*:—he also saw Gulls at Cape Froward, in the Straits of Magellan; at New Holland; at New Zealand; near Statenland; in all the low islands of the southern Archipelago; and many of the natives of Easter Island wore a

wooden

attached to the shores of the northern seas *. It is reported that the Gulls of the Feroe islands are so strong and voracious, that they often tear the lambs in pieces, and transport the fragments to their nests †. In the icy ocean, they often gather in multitudes about the carcases of whales ‡; and on these masses of corruption they fear not infection. With such repasts they easily satiate their rapacity, and procure ample provision for the innate gluttony of their young. These birds strew their eggs and nests by thousands, even on the frozen lands of the two polar zones ||; nor do

wooden hoop decked with the white feathers of Gulls, which waved in the air.—Clouds of Gulls produce in a great measure the dung which covers the island of Iquique, and which is carried, under the name of *guano*, into the valley of Arica. *Le Gentil*.—The Gull of Louisiana is like that of France. *Dupratz*.—A number of Gulls and other birds came (at the Malouine islands) to hover on the water, and darted upon the fish with extreme swiftness; they led us to discover the proper season for catching sardines; if held a moment suspended, they threw up that fish entire as it was just swallowed: these birds lay round the pools, on green plants like the water-lily, a great number of excellent wholesome eggs. *Bougainville*.

* They abound on those of Greenland to such a degree, that the wretched inhabitants of that frozen region have a peculiar word to signify the hunting of this unpalatable game; *ukhalliarpok*.

† Forster.

‡ Hist. Gen. des Voyages, tom. xix. 48.

|| On the 5th of June we had already seen lumps of ice, which surprised us so much, that we took them at first for swans . . . On the 11th, beyond the latitude of 75°, we landed on the island of *Baeren*, where we found numbers of Gulls eggs. *Barentz*.—We advanced as far as the island which Oliver Noorts had named *King's Island*, (near the straits of *Le Maire*); some sailors who went ashore, found

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do they quit those regions in the gloom of winter, but seem attached to their native climates, and scarcely affected by the change of temperature *. Aristotle, who lived under a sky infinitely milder indeed, remarked that the Gulls and Mews never disappear, but remain the whole year in the places of their nativity.

The same observation holds with respect to France; for many species of this bird are seen on our coasts, both in summer and in winter: on the western shores they are called *mauves*, or *miaules*, and on the southern *gabians*. Every where they are noted for their voracity and their disagreeable importunate cries. Sometimes they keep on the low shores, sometimes they retire into the cavities of the rocks, expecting the waves to cast out their prey; often they attend the fishers, to pick up the refuse and garbage: and this habit is doubtless the only ground of the affection towards man, which the ancients ascribed to these birds †. As their flesh is unfit for eating ‡, and their plumage of

no

the ground almost entirely covered with eggs of a particular kind of Gull; one might reach forty-five nests with his hand, without changing place, and each contained three or four eggs, rather larger than those of lapwings. *Le Maire and Schouten*.

* The birds which pass in greatest numbers towards Hudson's Bay in spring, to breed in the north, and which return to the southern countries in autumn, are the storks, the geese, the ducks, the teals, the plovers . . . but the Gulls spend the winter in the country, amidst ice and snow. *Hist. Gen. des Voyages*, tom. xv. 267.

† Oppian.

‡ We could not have tasted it without vomiting, if we had not previously exposed them in air, hanging by the claws, with their heads

no value, they are neglected by the fowler, and suffered to approach without being fired upon*.

Curious to observe by ourselves the habits of these birds, we sought to procure some alive; and M. Baillon, who is ever ready to oblige us, sent a large Gull with a black mantle of the first species, and a gray-mantled Gull of the second species. We have kept them fifteen months in a garden, where we could observe them at all times. They showed at first evident signs of their malevolent temper, pursuing each other continually, the large one never permitting the small one to eat beside him. They lived on soaked bread, the guts of game and of poultry, and other offals from the kitchen, none of which they ever refused. They also gathered worms and snails in the garden, and could easily separate the shells. They often went to bathe in a

heads downwards for several days, that oil or whales fat might drop from their body, and that they might lose their rank taste. *Recueil des Voyages du Nord*, tom. ii. 89.

* The savages of the Antilles, however, eat these unfavourable birds.—“There are,” says Father Dutertre, “numbers of small islands so full of them, that all the savages in passing load their canoes with them; it is droll to see how these people prepare them; they throw them entire, without gutting or plucking them, into the fire, and the burnt feathers form a crust within which the bird is cooked. When they purpose to eat, they remove this crust, then half open the bird. I know not how they preserve the carcase from corruption, for I have seen some that had been roasted eight days before, which is the more surprising, as in twelve hours most kinds of flesh in those countries run into putrefaction.”

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small basin, and on coming out of the water they shook themselves, clapped their wings, and then preened their plumage, like the geese and ducks. They roved at night, and were often seen walking out at ten or eleven o'clock. They do not, like most other birds, conceal their head under their wing when they sleep; they only turn it behind, resting the bill between the upper side of the wing and the back.

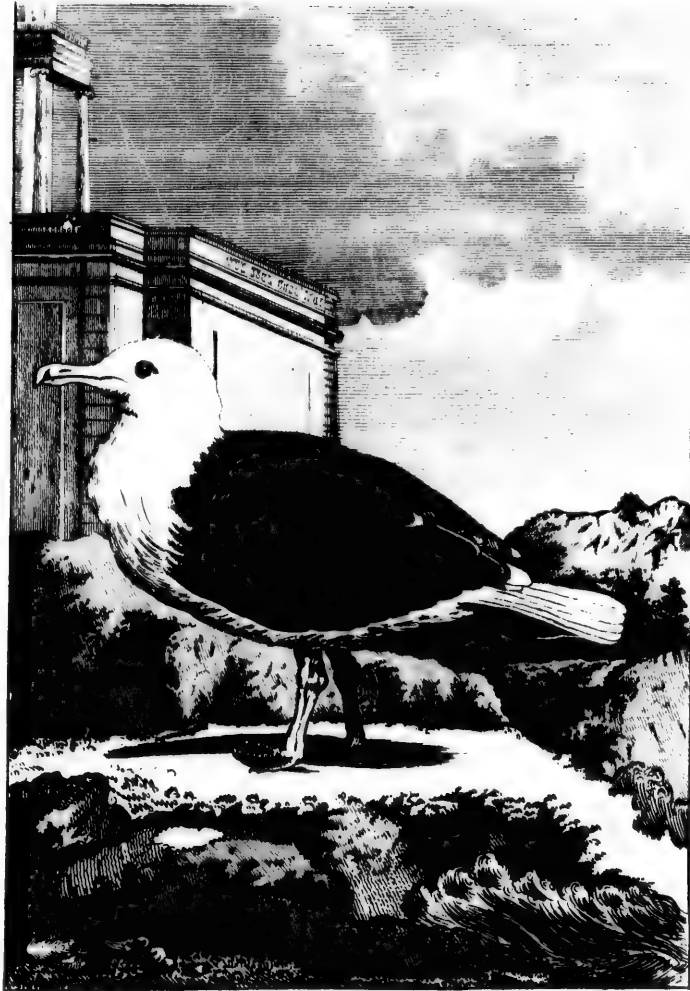
When a person tried to catch these birds, they bit and pecked with rancour: to master them without suffering injury, it was necessary to throw an handkerchief over their head. If one pursued them, they quickened their pace by spreading their wings. Usually they walked slowly and ungracefully. Their sloth was betrayed even in their rage; for when the largest pursued the other, he walked leisurely, without seeming to care whether he should overtake it; nor did the other show any anxiety to escape, and when it reckoned itself to be at a sufficient distance, it stopped; and it repeated this exertion as often as it was pressed, so as to keep always beyond its enemy's reach, as if remoteness was sufficient to destroy the antipathy.—Must not thus the weak ever retire for safety before the strong? But unfortunately tyranny, in the hands of man, is an engine which extends as far as his thought!

These birds appeared the whole winter to
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forget the use of their wings. They discovered no inclination to fly away: they were indeed well fed, and their gluttonous appetite could not torment them. But in the spring they felt new appetites, and showed other desires; they endeavoured to rise into the air, and would have escaped, had not several inches been clipt from their wings: they could therefore only spring by jerks, or whirl on their feet with their wings expanded. The passion of love, which wakens with the season, seemed to suppress the instinct of antipathy, and destroy their mutual enmity: for they seemed to fondle each other, and though they did not consort, being of different species, they ate, slept, and rested together. But their plaintive cries and restless motions, sufficiently declared, that the sweetest sentiment of nature was provoked, not satisfied.

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THE BLACK BACKED GULL.

The BLACK-MANTLED GULL*.

FIRST SPECIES.

Larus Marinus. Linn. and Gmel.

Larus Niger. Briss.

Larus Maximus Varius. Pay, Will. and Klein.

The Great Black and White Gull. Alb. and Penn.

The Black-backed Gull. Sealingfleet and Latham.

THIS is the largest of all the Gulls; it is two feet, and sometimes two feet and an half, in length: a great mantle of black or slaty blackish covers its broad back; all the rest of its plumage is white: its bill is firm and strong, about three inches and a half long, yellowish, with a red spot on the projecting angle of the lower mandible: the eye-lid is orange-yellow; its feet, with their membrane, are flesh-coloured, whitish and mealy.

The cry of this great Gull, which we kept a whole year, is a hoarse sound, *qua, qua, qua*, uttered in a raucous tone, and repeated very fast: but this is seldom heard, and when the bird is taken it vents a doleful and very shrill scream.

* In Swedish *Homaoka*: in Danish *Swart-bag*, *Blaa-maage*: in Norwegian *Hav-maase*: in Lapponic *Gairo*: in Icelandic *Swart-bakur*: in Greenlandic *Naviarlurskak*.

[A] Specific character of the *Larus Marinus*: "It is white, its back black." Besides the northern parts of Europe, it is spread over the whole of North America, and in the Carolina it is, on account of its sober garb, called *the old wife*.



The GRAY-MANTLED GULL.

SECOND SPECIES.

Larus Glaucus. Gmel.

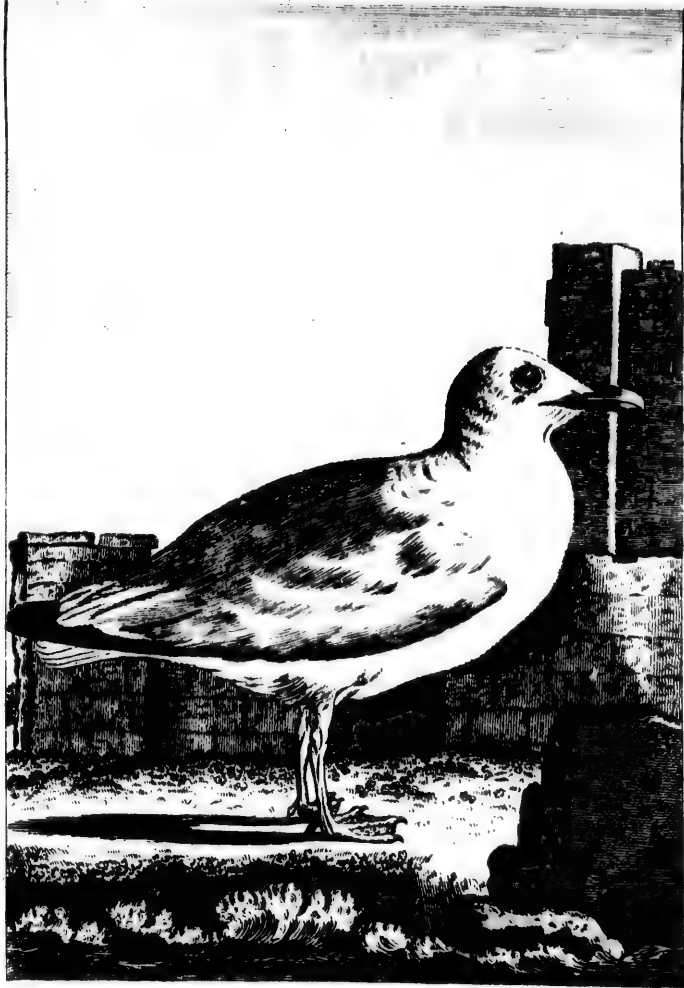
Larus Cinereus. Briss.

The Glaucous Gull. Penn. and Lath.

ASH-GRAY, spread on the back and shoulders, is the livery common to many species of mews, and which distinguishes this Gull: it is rather smaller than the preceding, and except its gray mantle, and the black furrows on the great quills of the wing, its plumage is entirely white. The eye is brilliant, and the iris yellow as in the hawk: the feet are a livid flesh-colour: the bill, which in young ones is almost blackish, is pale yellow in adults: there is a red spot at the swell of the lower mandible, a character common to many species of gulls and mews. This bird flies from the preceding, and dares not dispute with it about its prey. But it revenges itself on the mews, which are its inferiors in strength: it pillages them, pursues them, and wages continual war with them. It frequents much, in the months of November and December, the coasts of Normandy and Picardy; where it is called the *large miaulard* and

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THE GLAUCOUS GULL.

and *blue-mantle*, as the appellation *black-mantle* is bestowed on the first species. This bird had several distinct cries which it uttered in the garden, where it lived with the preceding ; and the first and most frequent of these seemed to be the two syllables *qui-ou*, which began like a whistle, short and sharp, and closed with a drawling tone, lower and softer. It was repeated only at intervals, and to produce it the bird was obliged to make an effort, and to extend its neck and incline its head. The second cry, which was never vented but when pursued, or held close, and which was therefore an expression of fear or anger, may be imitated by the syllable *tia*, *tia*, whistled and repeated very fast. —We may observe, by the way, that of all animals the cries of anger or fear are sharper and shorter than the usual accents.—About spring this bird assumes a very shrill, piercing voice, which might be denoted by the word *quieute* or *pieute*, sometimes short and rapidly pronounced, sometimes produced on the final *eute*, with distinct intervals, like the sighs of a person in distress. In either case, this cry seems to be the plaintive expression inspired by unsatisfied love.

[A] Specific character of the *Larus Glaucus* : “ It is white ;
 “ its back and wings hoary ; its wing-quills tipped with white ; its
 “ bill bright yellow, with the corner saffron.”

The BROWN GULL.

THIRD SPECIES.

Larus Catarrhætes. Linn. and Gmel.

Larus Fuscus. Briss.

Catarrhætes. Gesner, Sibbald, and Will.

Catarracta. Aldrov. Johnst. and Charleton.

The Skua Gull. Penn. and Lath.

THIS Gull has its plumage of an uniform dusky brown over the whole body, except the belly, which is striped across with brown on a gray ground, and the great quills of the wing, which are black. It is somewhat smaller than the preceding, its length from the bill to the extremity of the tail being only a foot and eight inches, and an inch less to the nails, which are sharp and stout. Ray observes, that the whole habit of the body of this bird bespeaks rapine and carnage; and such indeed is the base and cruel aspect of all the sanguinary tribes of gulls. It is to this species that naturalists have generally referred the *Catarrhætes* of Aristotle*, which, as the word imports†, descends with rapidity to seize its prey; which agrees well

* Hist. Animal. lib. ix. 12.

† From *Kata* downwards, and *Pto* to flow: hence also the word *catarract*.

with

with what Willughby reports of the great gull, that it dashes its head against the board on which the fishermen fix the bait. The *Catarractes* of Aristotle is undoubtedly a marine bird, since, according to the philosopher, it drinks seawater *. The Brown Gull in fact occurs on the ocean, and the species appears to be settled in the high latitudes on both sides of the equator: it is common in the Feroe islands, and on the coasts of Scotland †. It seems even more diffused on the shores of the South Sea; and is probably the bird which our navigators denominate *the cobbler* (*cordonnier* ‡) without hinting at the

* Nothing surely is more false than what Oppian says, that the *Catarractes* contents itself with dropping its eggs upon the seaweeds, and leaving them to be fostered by the wind; unless it be what he adds, that about the time they are to hatch, the male and female take each in their claws an egg which is to produce a chick of their own sex, and let them fall repeatedly on the sea, till by this exercise the young birds burst from their prison.

† *Catarractes Nester*. Sibbald.

‡ According to the notes which the Viscount de Querhoënt has had the goodness to communicate, the cobbler occurred in his route, not only near the Cape of Good Hope, but in higher or lower latitudes in the open sea. This observer seems to distinguish a greater and a lesser species of these birds, as will appear from the following extract:

"I believe that the inhabitants of the water live more friendly and socially than those of the land, though of very different species and sizes: they alight pretty near each other without any mistrust; they hunt in company, and I never but once saw a fight between a frigate and the lesser kind of cobbler; it lasted pretty long in the air, and each defended itself with its wings and its bill: the cobbler, though incomparably weaker, eluded by its agility the formidable blows of its antagonist, and did not

the reason of that appellation. The English found numbers of them at Port-Egmont, in the Falkland or Malouine islands, and have therefore stiled them *the Port Egmont hens* *. We cannot do better than transcribe the account given in the second voyage of the celebrated Captain Cook.

“ yield; it was vanquished, when a petrel which chanced to be
 “ near repaired to the scene, and, by passing and re-passing several times between the combatants, effected their separation; the
 “ cobbler through gratitude followed its deliverer, and came with it
 “ round the ship.”

* On the 24th of February, in latitude $44^{\circ} 40'$, on the coasts of New Zealand, Mr. Banks, being in the boat, killed two Port-Egmont hens, exactly like those which we had found in great numbers on the island of Faro, and which were the first that we saw on this coast, though we had met with several a few days before we discovered land. *Cook*.—In $50^{\circ} 14'$ latitude south, and $95^{\circ} 18'$ longitude west, as many birds were flying about the ship, we took the opportunity of the calm to kill some of them; one was of the species which we have so often mentioned under the name of the Port Egmont hen, a sort of gull nearly of the size of a raven, and of a deep brown plumage, except below each wing, where there were some white feathers; the rest of the birds were albatrosses and sheer-waters. *Idem*.—On the islands near Statenland, we counted among the sea-birds the *Port Egmont hens*. *Idem*.—The birds which we met with in Christmas Sound, near Terra del Fuego, were geese, ducks, sea-pies, shags, and that kind of gull so often mentioned in this Journal by the name of *Port Egmont hen*. *Idem*.—There were also (at New Georgia) albatrosses, common gulls, and that kind which I call *Port Egmont hen*. *Idem*.—In the latitude of $54^{\circ} 4'$, we also saw a Port Egmont hen, and some weed. Navigators have generally looked upon all these to be certain signs of the vicinity of land; I cannot, however, support this opinion. At this time we knew of no land, nor is it probable there is any nearer than New Holland or Van Diemen's land, from which we were distant two hundred and sixty leagues. *Idem*.

“ In

" In the evening, being in the latitude of
 " $64^{\circ} 12'$ south, longitude $40^{\circ} 15'$ east, a bird
 " called by us in my former voyage Port Eg-
 " mont hen, (on account of the great plenty of
 " them in Falkland Isles) came hovering several
 " times over the ship, and then left us in the
 " direction of N. E. They are a short thick
 " bird, about the size of a large crow, of a dark
 " brown or chocolate colour, with a whitish
 " streak under each wing in the shape of a half-
 " moon. I have been told that these birds are
 " found in great plenty at the Feroe Islands
 " north of Scotland, and that they never go far
 " from land. Certain it is I never before saw them
 " above forty leagues off; but I do not remem-
 " ber ever seeing fewer than two together;
 " whereas here was but one, which, with the
 " islands of ice, may have come a good way
 " from land *."

* (To this account Mr. Forster adds, that he recognized it to be the great northern gull, *Larus Catarractes*, common in the high latitudes in both hemispheres; that a few days after they saw another of the same kind, which rose to a great height above their heads, which they regarded as a novelty, the birds of that climate keeping near the surface of the water.)

[A] Specific character of the *Larus Catarractes*: " It is
 " grayish; the quills of its wings and tail are white at the base; its
 " tail somewhat equal."

The VARIEGATED GULL; or, the GRISARD.

FOURTH SPECIES.

Larus Catarrhactes. Linn. and Gmel.

Larus Nævius. Gmel.

Larus Marinus, var. 2. Lath. Ind.

Larus Varius, five Skua. Briff.

Larus Major. Aldrovandus.

Larus Cinereus Major. Charleton.

Larus Griseus Maximus. Klein.

The Wagel of the Cornish. Ray.

The Sea Eagle. Sibbald's Hist. Fife.

The Skua Gull. Penn.

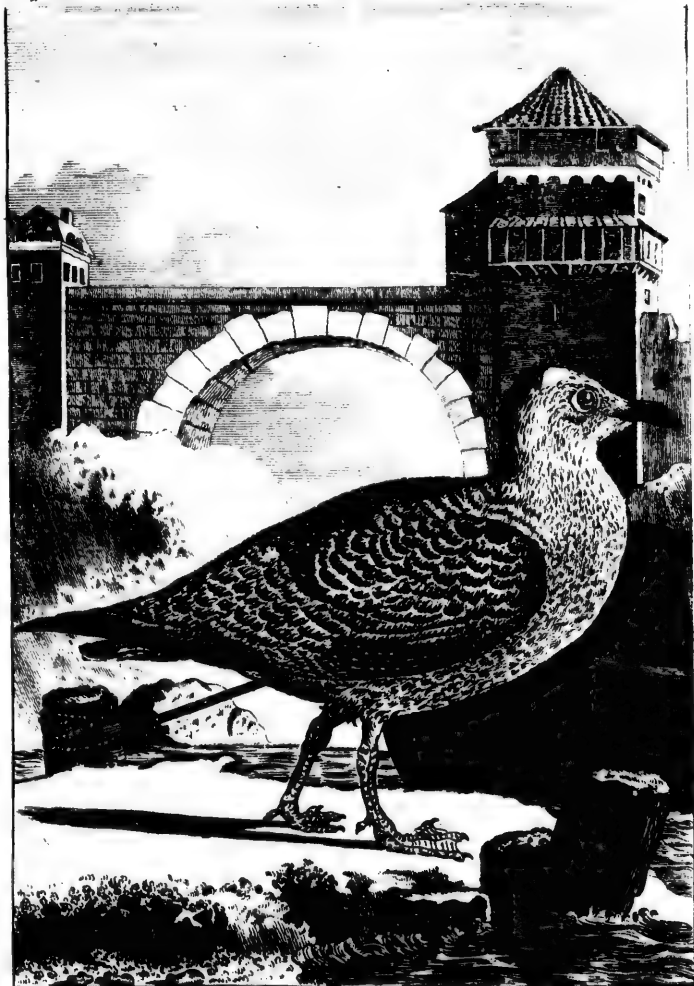
The Wagel Gull. * Lath. Syn.

THE plumage of this Gull is broken, and streaked with brown gray on a white ground; the great quills of the wing are blackish; the bill black, thick and stout, and four inches long. This Gull is one of the largest, its alar extent being five feet, which measure was taken from an individual sent alive from *Montreuil-sur-Mer*, by M. Baillon. This bird lived a long time in a court-yard, where it killed its companion by fighting: it showed the sordid

* In Holland it is called *Mallemecke*; in the Feroe islands *Skua*; in Norway *Skue*, *Kau-orre*.

familiarity

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THE WAGEL GULL.

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familiarity of a voracious animal, which hunger only attaches to the hand that feeds it. It swallowed flat fish almost as broad as its body; and with equal avidity it devoured raw flesh, and even small animals entire, such as moles, rats, and birds *. A gull of this kind, which Anderson received from Greenland, attacked small animals, and fiercely defended itself with its bill against dogs and cats, and took pleasure in biting their tails. On showing it a white handkerchief, it was sure to scream with a piercing tone, as if that recalled to its memory some foe which it dreaded at sea.

All the Grifards are, according to the observations of M. Baillon, of a dirty and dark gray when young; but after the first moult the tint grows more dilute, the belly and the neck whiten first, and, in three moults, the plumage is entirely waved and freckled with gray and white, such as we have described it. The white afterwards continues to gain ground, and the aged birds are entirely hoary. If the plumage, therefore, were the sole foundation of distinction, we should admit an unnecessary number of species, since nature varies to such degree the colours with the years.

In this, as in all the other gulls and mews,

* Whence probably the fable of Oviedo (*Hist. Ind. Occid.* lib. xiv. 18.) has been applied to the Grifard, of a bird which has one foot webbed for swimming and the other armed with talons for seizing its prey.

the female appears rather smaller than the male. Belon remarks, that it is not common in the Mediterranean, that it seldom occurs in our interior provinces *, but is numerous on our western coasts. It roams very far to sea, since we are assured of its being found in Madagascar †. But the congenial region of this species seems to be the North. These birds are the first which the vessels meet in approaching Greenland ‡; and they constantly attend those employed in the whale-fishery, following them even amidst the ice. When a whale is killed, they alight in myriads on the floating carcase, and tear it on all sides §: and though the fishers labour to drive them away, by striking with poles and oars, they can hardly, without felling them, make them quit their hold ||. This senseless obstinacy has occasioned the Dutch name *Mallemucke* or *stupid beast* ¶. “ These foolish, fordid

* M. Lottinger pretends that he has seen some of these birds on the great pools of Lorraine, in the fishing season; and M. Hermann speaks of a Grisard killed in the neighbourhood of Strasbourg.

† Note communicated by Dr. Mauduit.

‡ Klein.

§ The herrings afford abundant subsistence to these legions of birds: Zorgdrager says, that he saw a quantity of herring bones about the nests of the water-fowl on the rocks of Greenland. *Pêche de la Baleine, partie ii. 7.*

|| Memoirs of the Academy of Stockholm.

¶ From *mall*, which signifies *foolish* or *stupid*; and *mocke*, which in old German means *beast* or *animal*.

“ birds,

"birds, quarrel and fight," says Martens, "snatching from each other their morsels, though the large carcases on which they feed might abundantly satiate their voracity."

Belon perceived some analogy between the head of the Variegated Gull and that of the eagle: but, in its sordid groveling habits, it much more resembles the vultures. Its stout, hardy constitution renders it capable of bearing the most inclement weather; and mariners have remarked, that it cares little for storms at sea. It is well clothed with feathers, which seem to form the chief part of the bulk of its very lean body. But we are not certain if all these birds be constantly lean; for the one which we chanced to see, had a hook sticking in its palate, and grown over with callous flesh, which must have hindered it from swallowing easily.

According to Anderson, it has an air-bag under its skin, like that of the pelican*. This naturalist observes, that his Greenland *Mallumucke* differs in some respects from that of Spitzbergen, described by Martens. We must notice that Martens himself seems to join, under this name *Mallumucke*, two birds, which at

* He adds some anatomical details: "Each lobe of the lungs is formed like a separate lung in shape of a purse; the crystalline of the eye is spherical like that of fishes; the heart has only one chamber; the bill is perforated with four nostrils, two disclosed, and two concealed under the feathers at the root of the bill." *Hist. Nat. d'Islande & de Groënland.*

other times he discriminates ; and the second, or that of Spitzbergen, from the structure of its bill, *articulated with several pieces*, and having *tubular nostrils*, and also *its croaking like frogs*, appears to be a petrel, rather than a gull.—To this species we may also refer a race or variety, larger than the common, and whose plumage is rather waved than spotted or striped : it is described by Lidbeck, and occurs in the gulf of Bothnia ; some individuals are eight or ten inches longer and broader than the common kinds of *Grijards*.

[A] Specific character of the *Larus Newius* : " It is white ; its back cinereous ; its tail-quills tipped with black."

The BROWN-GRAY-MANTLED GULL ; or, the BURGOMASTER.

FIFTH SPECIES.

Larus Glaucus. Linn. and Gmel.

Larus Cinereus. Briss.

Burgermeister. Martens and Klein.

The Glaucous Gull. Penn. and Lath. *

THE Dutch who frequent the northern seas on the whale fishing, are constantly at-

* In Sweden it is called *Maos* : in Norway *Krykie* : in Lapland *Skierro* : and in Greenland *Tatarrok*.

tended

tended by clouds of mews and gulls. They have sought to distinguish them by names significative or imitative, *mallemucke*, *kirmew*, *ratshet*, *kutgegefs*. The present they have stiled the *Burgomaster*, because, by its stature and grave deportment, it would seem to preside as a magistrate among these disorderly and voracious tribes *. It is indeed a species of the first magnitude, and as large as the black-mantled gull. Its back is brown-gray, and also the quills of the wing, of which some are tipped with white, others with black, the rest of the plumage white: the eye-lid is edged with red or yellow: the bill is yellow, with the lower angle very protuberant, and of a bright red; which Martens well expresses, by saying, that it seems to have a red cherry on the bill. It was probably from oversight that this traveller neglects to reckon the hind-toe, which is indeed very small: for it is evidently the same with the *ber-ring gull* † of the English. In the northern seas, these birds live on the carcases of large fish. "When a whale is dragged after a vessel," says

* There are prodigious numbers of these aquatic birds in Greenland: we find there all the species described by Martens, in his Voyage to Spitzberg, and many others which he does not mention.

† *Larus Fuscus*. Linn. and Gmel.

Larus Griseus. } Briff.

Gavia Grisea. }

Larus Cinereus Maximus. Ray, Will. and Sloane.

Specific character: "It is white; its back brown."

Martens,

Martens, "they flock about it, and steal large pieces of the blubber. They may then be easily killed; but it is impossible to gain its nest, which it places on the summit and in the clefts of the highest rocks. The *Burgomaster*," he adds, "intimidates the *malle-mucke*, which, however stout it be, submits to be beaten and pecked, without attempting to retaliate. When the Burgomaster flies, its white tail spreads like a fan. Its cry resembles that of a raven: it pursues the young *lumbs*, and often hovers about the sea-horses, whose dung it seems to swallow."

According to Willughby, the eggs of this gull are whitish, sprinkled with some blackish spots, and as large as hen's eggs. Father Feuillée mentions a bird on the coasts of Chili and Peru, which, by its figure, its colours, and its voracity, resembles this northern gull, but which is probably smaller; for that travelled naturalist says, that its eggs are only somewhat larger than those of the partridge. He subjoins, that he found its stomach entirely filled with the feathers of certain small birds of the coasts of the South Sea, which the natives call *tocoquito*.

The GRAY and WHITE-MANTLED GULL.

SIXTH SPECIES.

Larus Fuscus. Linn. and Gmel.

Gavia Grisea. Briss.

The Herring Gull. Penn. and Lath.

IT is probable that this Gull, described by Father Feuillée, and which is nearly as large as the gray-mantled Gull, is only a shade or variety of that species, or of some of the preceding, at a certain age. Its figure and structure seem to lead to that inference. Its mantle, says the Jesuit, is gray mixed with white, and so is the upper surface of the neck, of which the fore side is light gray, and all its *livery*: the quills of the tail are dull red lead colour, and the top of the head is gray. He adds, as a singular property, that the inner toe has only two joints, the middle one three, and the outer four, which is therefore the longest; but this structure, the most favourable for swimming, since the broadest part of the sole has thus the greatest compass of motion, occurs in a great number of aquatic birds, and even among the waders. We have observed particularly in the jacana, the sultana, and the water hen, that the outer toe contained four *phalanges*, the middle one three, and the inner only two,

The WHITE MEW.

FIRST SPECIES.

Larus Eburneus. Gmelin and Phipps.*The Ivory Gull.* Penn. and Lath.

FROM what we have said of the wagels, which whiten with age, we might suppose that this is only an old one; but it is much smaller than that gull; its bill is neither so large, nor so strong, and its plumage is pure white, without any tinge or spot of gray. It exceeds not fifteen inches from the end of the bill to that of the tail. It is described in Captain Phipps's * voyage to the north: he observes very properly, that this species has not been delineated in the Linnæan system, and that the bird called *raths-berr*; or senator, by Martens, perfectly resembles it, except in the feet, to which Martens attributes only three toes. But if we suppose the fourth toe, which is very mi-

* "The whole bird is snowy and spotless; its bill lead-coloured; its orbits saffron, ash-leaden; its nails black; its hind-toe jointed and nailed; its wings longer than its tail; its tail equal, and longer than its feet. The whole length of the bird, from the tip of the bill to the end of the tail, is sixteen inches; the distance between the tips of the spread wings, thirty-seven inches; the bill two inches."

nute,

nute, to have escaped the observation of that navigator, it would exactly correspond to his *raths-berr*. Its whiteness surpasses that of snow; and the stately pace of the bird on the ice has procured it the appellation of *raths-berr*, or senator. Its voice is low and strong; and whereas the little mews or *kirmews* seem to call *kir* or *kair*, the Senator sounds *kar*. It is usually solitary, unless some prey collects a certain number of them. Martens saw them alight on the carcases of sea-horses, and devour their dung.

[A] Specific character of the *Larus Eburneus*: "It is all white, " its orbits saffron, its bill and feet lead-coloured."

The SPOTTED MEW; or, the KUTGEGHEF.

SECOND SPECIES.

<i>Larus Riga.</i>	} Gmel.
<i>Larus Tridactylus.</i>	
<i>Gavia Cinerea Nævia.</i>	} Briss.
<i>Gavia Cinerea.</i>	
<i>Larus Cinereus Piscator.</i>	Klein.
<i>The Tarrock of the Cornish.</i>	
<i>The Kittiwake of the Scotch.</i>	

"W HILE we were cutting up the whale-
" blubber," says Martens, " a number
" of these birds came screaming about our ship,
" and

nute,

“and seemed to pronounce *kutgeghef*.” That sound resembles, indeed, the sort of sneezing, *keph*, *keph*, which several captive gulls utter, and from which we conjectured the Greek name *νεπφος* was derived. This bird exceeds not in bulk the white mew; it is only fifteen inches long: the plumage consists of a fine white ground on the fore side of the body, and gray on the mantle, marked with some streaks of the same gray that form a kind of half-collar on the upper side of the neck; it is distinguished also by spots of white and black mixed on the coverts of the wing, with varieties, however, which we shall mention. The hind toe, which is very small in all the mews, is scarce perceptible in this one, as Belon and Ray observe. And hence Martens says, that it has only three toes: he adds, that it always flies rapidly against the wind, however violent this blows; but that it is perpetually pursued and harrassed by the bird *strundt-jager* *, and constrained to void its excrements, which the latter greedily swallows. In a subsequent article †, we shall find that this depraved taste has been erroneously imputed to the *strundt-jager*.

This Spotted Mew occurs not only in the seas of the north, it also inhabits the coasts of England ‡ and Scotland ||. Belon, who met with it

* i. e. *Dung-bunter*.

† See the article of the *Dung-bird*.

‡ Ray.

|| Sibbald.

in Greece, says, that he recognized it merely from the name *laros*, which it still bears in that country: and Martens, after having observed it at Spitzbergen, found it again in the Spanish seas, somewhat different, indeed, yet still distinguishable; whence he very judiciously infers, that animals of the same species in distant countries must ever receive impressions from the climates. So great is the difference in the present case, that this species has been split into two: the *cinereus mew* of Brisson, and his *cinereus spotted mew*, are unquestionably the same, as a comparison of the figures will evince. And what completely establishes our position, is a series of subjects, which exhibits a gradual progress of the black and white of the wing, from the mottled colours to the simple gray. The gray half-collar on the top of the neck is common to all the individuals of this species.

Flocks of these Mews appeared suddenly near Semur in Auxois, in the month of February 1775. They were very easily killed, and were found dead or half-starved with hunger in the meadows, the fields, and the brinks of rivulets. On opening them, their stomach was found to contain some fragments of fishes, and their intestines a blackish jelly. These birds were not known in the country; their appearance lasted only a fortnight; they were brought by a strong south wind, which blew all that time*.

* Observation communicated by M. de Montbeillard.

[A] Specific.

[A] Specific character of the Kittiwake, *Larus Riga*: "It is white, its back hoary, its tail-quills entirely white, its feet have three toes."—Specific character of the Tarrock, *Larus Tridactylus*: "It is whitish, its back somewhat hoary, its tail-quills, except the outermost, tipped with black; its feet have three toes." But Mr. Latham very properly classes them under the same species, the Tarrock being only the young bird.

The GREAT CINEREOUS MEW; or, the BLUE-FOOTED MEW.

THIRD SPECIES.

Larus Canus. Linn. and Gmel.

Gavia Cinerea. Briff.

Gaiedor, Crocala, Galetra. Aldrov.

Gabiano Minore. Zinn.

Larus Restro Nigro. Klein.

Larus Cinereus Minor. Will. Ray, and Sibb.

The Common Sea-Mall, or Mew. Will. and Ray.

The White Web-footed Gull. Albin.

The Common Gull. Penn. and Lath.

THE bluish colour of the feet and bill, constant in this species, ought to distinguish it from the others, which have the feet generally of flesh-colour, more or less vermilion or livid. It is sixteen or seventeen inches long, from the point of the bill to the end of the tail; its mantle is light cinereous; several of the wing-quills are furrowed with black; all the rest of its plumage is snowy white.

Willughby

Willughby reckons this the most common species in England. It is called the *grand emiaulle* * on the coasts of Picardy. M. Baillon has made the following observations on the different shades of colours that its plumage assumes in the successive moultings: in the first year the quills of the wings are blackish; and not till the second moulting do they acquire the distinct black and the white spots with which they are variegated: no young Mew has a white tail, the end is always black or gray; at the same age the head and the upper side of the neck are marked with some spots, which are by degrees obliterated, and give place to pure white: the bill and the feet gain not their full colour till two years old.

To these general observations, very important as they are to stop the unnecessary multiplication of species from individual varieties, M. Baillon adds some on the particular nature of the Blue-footed Mew. It is more difficult to tame than the rest, yet it seems not so wild in the state of liberty: it fights less, and is not so voracious as most of the others; but it is not so sprightly as the little cinereous Mew. When kept in a garden, it fought earth-worms: if offered small birds, it would not touch them till they were half-torn; which shews that it is not

* i. e. *The Great Mew*, from *miauler*, to squall like a cat; whence the English verb *to mew*, and the names of these birds *Mall* and *Mew*.—T.

386 LITTLE CINEREOUS MEW.

so carnivorous as the gulls. And as it is not so lively or cheerful as the little Mews, which remain to be described, it seems, by its size and its instincts, to hold the middle rank between them both.

[A] Specific character of the Common Sea-Mew, *Larus Canus*: "It is white, its back hoary." It is the most numerous of all the gulls, at least in Great Britain. It breeds on the ledges of the cliffs that overhang the sea.

The LITTLE CINEREOUS
MEW.

FOURTH SPECIES.

Larus Cinerarius. Linn. and Gmel.

Gavia Cinerea Minor. Briss.

Larus Cinereus Primus. Johannst.

The Red-legged Gull. Lath.

ITS inferior size, and the different colour of its legs, distinguish this Mew from the preceding, which it resembles exactly in its colours. It has the same light cinereous and bluish on its mantle, the same black scallops spotted with white on the great quills of the wing, and lastly, the same snowy white over all the plumage, except a black speckle, which appears

appears constantly on the sides of the neck behind the eye. The livery of the young ones consists of brown spots on the coverts of the wing. In the aged, the feathers of the belly have a slight tint of rose colour; and it is not till the second or third year, that the legs and the bill degenerate from a fine red into a livid complexion.

This and the laughing Mew are the two least of the whole family. They exceed not the bulk of a large pigeon, and their body is much thinner: they are thirteen or fourteen inches long. They are very handsome, clean, and active; less vicious than the large species, yet more lively. They eat many insects, and during summer they make a thousand evolutions in the air after beetles and flies. They take such quantities of those, that their stomachs are filled up to their bill. They follow the rise of the tide* in the rivers, and spread some leagues over the land, groping in the marshes for worms and leeches, and return in the evening to the sea. M. Baillon, who made the observations, adds, that they might easily be made to inhabit gardens, where they would feed on insects, small lizards, and other reptiles. Yet they may be kept on soaked bread, but must always have much water, because they every instant wash their bill and feet. They are very clamorous,

* Sometimes they advance very far: M. Baillon saw one on the Loire, above fifty leagues from its mouth.

especially when young; and on the coast of Picardy they are called the *petites miaulles*, (the little Mews). It seems that the name *tattaret* has also been applied on account of their cry *. They appear to be the same with the gray gulls mentioned in the Portuguese relations of India, under the denomination *garaios*, and which navigators meet with in numbers on the passage from Madagascar to the Maldives †. To some similar species also we must refer the bird called *tambilagan* in Luçon, and which is a gray Mew of small size, according to the short description given by Camel in his account of the Philippine birds, inserted in the Philosophical Transactions.

* "The *tattaret* is a little common gull; it derives its name from its cry. It is the smallest, but the handsomest of the birds of this class: it would be entirely white, were not its back azure. The *tattarets* build in flocks, on the summits of the most craggy rocks; and if a person approaches them, they begin to fly with shrill cries, as if they would frighten people away with the hideous noise." *Hist. Gen. des Voyages*, tom. xix. p. 47.

† On this track there are always seen numbers of birds, such as gray gulls, which the Portuguese call *garaios*. . . These gulls come to alight on the vessels, and suffer themselves to be caught by the hand, without fearing the sight of men, as having never experienced them: they had the same fate with the flying-fish, which they hunt on these seas, and which, being pursued at once by the birds and the fishes, often throw themselves on board the vessels. *Voyages qui ont servi à l'Etablissement de la Compagnie des Indes Orientales; Amsterdam*, 1702, tom. i. p. 277.

[A] Specific character of the *Larus Cinerarius*: "It is white, its back hoary, with a brown spot behind the eyes."

The LAUGHING MEW.

FIFTH SPECIES.

- Larus Ridibundus.* } Linn. and Gmel.
Larus Attricilla. }
Gavia Ridibunda Phœnicopus. } Briss.
Gavia Ridibunda. }
Cepphus Turneri. Gessn.
Larus Cinereus. Ray, Will. and Scop.
The Pewit, or Black Cap, Sea Crow, or Mire Crow. Will.
The Pewit. Plott's Staffordshire.
The Brown-headed Gull. Albin.
Baltner's Great Ash-coloured Sea Mew. Will.
The Pewit Gull. Penn.
The Black-headed Gull, Lath. *
The Laughing Gull. Catesby, Penn. and Lath.

THE cry of this little Mew bears some resemblance to a hoarse laugh; and hence its epithet. It is somewhat larger than a pigeon; but, like all the mews, its body appears much more bulky than in reality. The quantity of fine feathers with which it is clothed, makes it very light; hence it flies almost continually over the water; and during its short intervals on land, it is extremely bustling and noisy, particularly in the breeding season, when these birds are most collected†. It lays six olive

* In German *Großer See-Sawalle* (greater sea-swallow) and *Grauer Fischer* (gray fisher): in Polish *Rybitw Popielasty Wiekly*: in Mexican *Pipixcan*.

† Ray.

eggs spotted with black; the young ones are good food, and, according to the British Zoology, they are taken in great numbers in the counties of Essex and Stafford.

Some of these Laughing Mews settle on the rivers and even the pools of inland countries*; and they seem to frequent the seas of both continents. Catesby found them at the Bahama Islands: Fernandez describes them under the Mexican name *pipixcan*: and, like all the other mews, they abound most in the northern countries. Martens, who observed them in Spitzbergen, and calls them *kirmews*, says, that they lay on whitish moss, in which the eggs can hardly be distinguished, being also dirty white, or greenish dotted with black: they are as large as those of pigeons, but very sharp at the end; the yolk is red, and the albugineous liquor is bluish. Martens says, that he ate of them, and found them very good, tasting like the eggs of lapwings. The parents dart boldly on the person who dares to rob their nest, and with loud cries they endeavour to drive him off by striking with their bills. The first syllable of their name *kirmew*, is expressive of their notes, according to the same traveller; who remarks, however, that their voice differs in the various regions which they inhabit, the polar tracts, the

* Kramer and Schwenckfeld. These birds are seen on the Thames, near Gravesend, according to Albin.

coasts of Scotland, those of Ireland, and the German Ocean. He asserts that, in general, a difference may be perceived in the cries of animals of the same species, resulting from the influence of climate; and this diversity may indeed obtain, especially in birds, for the tones of animals are the expressions of their most usual sensations; and the feathered race are delicately sensible to the variations of the atmosphere, and to the impressions of temperature.

Martens observes likewise, that the Mews of Spitzbergen have finer and more hairy feathers than those of our seas. This difference, too, arises from the climate. Another, which seems to be derived from the age of the individual, consists in the colour of the bill and the feet: in some these are red, in others black. But what proves that this difference does not constitute two distinct species is, that the intermediate shade occurs in several subjects; some having the bill red, and the legs only reddish, and others having the bill red at the tip only, and the rest black. Thus we admit but one species of Laughing Mew; the difference which led Brisson to make a subdivision, lying entirely in the colour of the bill and of the legs. In the female, the front and throat are marked with white, whereas the whole head of the male is covered with a black cap: the great quills of the wing are also partly this colour: the mantle is bluish cinereous, and the rest of the body white.

[A] Specific character of the Black-headed Gull, *Larus Ridibundus*: "It is whitish, its head blackish, its bill and feet red."—Specific character of the Laughing Gull, *Larus Atricilla*: "It is somewhat hoary, its head blackish, its bill red, its feet black."

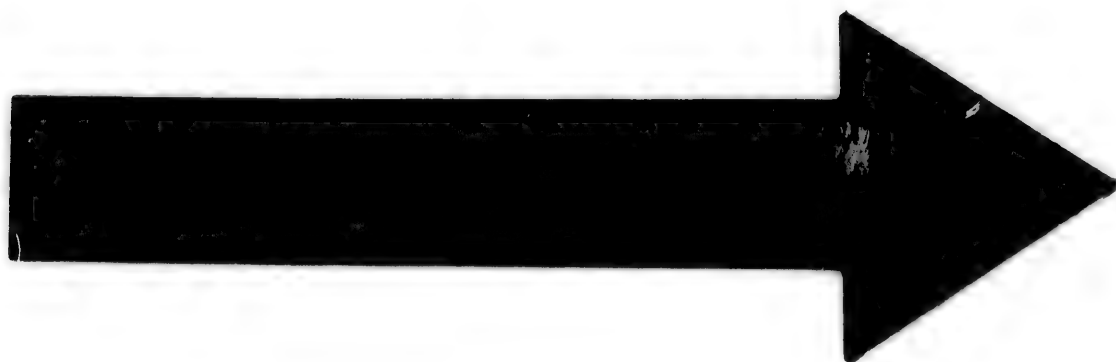
We shall transcribe Dr. Plott's account of the manner of catching the Pewits last century in Staffordshire. After relating some marvellous stories respecting their attachment to the lord of the manor, he thus proceeds: "Being of the migratory kind, their first appearance is not till the latter end of February, and then in number scarce above six, which come as harbingers to the rest, to see whether the hafts or islands in the pools (upon which they build their nests) be prepared for them; but these never so much as lighten, but fly over the pool, scarce staying an hour: about the 6th of March following, there comes a pretty considerable flight of an hundred or more, and then they alight on the hafts, and stay all day, but are gone again at night. About our Lady-day, or sooner in a forward spring, they come to stay for good, otherwise not till the beginning of April, when they build their nests, which they make not of sticks, but heath and rushes, making them but shallow, and laying generally but four eggs, three and five more rarely, which are about the bigness of a small hen egg. The hafts or islands are prepared for them between Michaelmas and Christmas, by cutting down the reeds and rushes, and putting them aside in the nooks and corners of the hafts, and in the valleys, to make them level; for should they be permitted to rot on the islands, the pewits would not endure them.

"After three weeks sitting the young ones are hatched, and about a month after they are almost ready to fly, which usually happens on the 3d of June, when the proprietor of the pool orders them to be driven and caught, the gentry coming from all parts to see the sport: the manner is thus—They pitch a rabbit-net on the bank-side, in the most convenient place over-against the hafts, the net in the middle being about ten yards from the side, but close at the ends in the manner of a bow; then six or seven men wade into the pool, beyond the pewits, over-against the net, with long staves, and drive them from the hafts, whence they all swim to the bank-side, and landing, run like lapwings into the net, where people are standing ready to take them up, and put them into two pens made within the bow of the net, which are built round, about three yards diameter, and a yard high, or somewhat better, with small stakes driven into the ground in a circle, and interwoven with broom and other raddles."—(This description is illustrated by an engraving).

"In

"In which manner there have been taken in one morning fifty dozens at a driving, which at five shillings a dozen (the ancient price of them) comes to £. 12. 10s.: but at several drifts that have been anciently made in the same morning, there have been as many taken as have sold for £. 30; so that some years the profit of them has amounted to £. 50 or £. 60, beside what the generous proprietor usually presents his relations and the nobility and gentry of the county withal, which he constantly does in a plentiful manner, sending them to their houses in crates alive; so that feeding them with livers and other entrails of beasts, they may kill them at what distance of time they please, according as occasions present themselves, they being accounted a good dish at the most plentiful tables.

"But they commonly appoint three days of driving them, within fourteen days, or thereabouts, of the 2d or 3d June; which, while they are doing, some have observed a certain custom that seems to be somewhat more concerned than the rest, being clamorous, and striking down upon the heads of the men; which has given ground of suspicion that they have some government among them, and that this is their prince that is so much concerned for its subjects. And it is further observed, that when there is great plenty of them, the Lent-corn of the country is much the better, and so the cow-pastures too, by reason they pick up all the worms and the fern-flies, which, though bred in the fern, yet nip and feed on the young corn and grafs, and hinder their growth." (The pools of Staffordshire, which the pewits frequented, were Pewit Pool, in the parish of Norbury, and Sebben Pool, in the parish of High Offley). *Plott's Natural History of Staffordshire*, pp. 232 and 233.



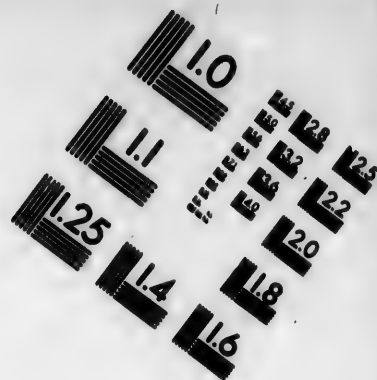
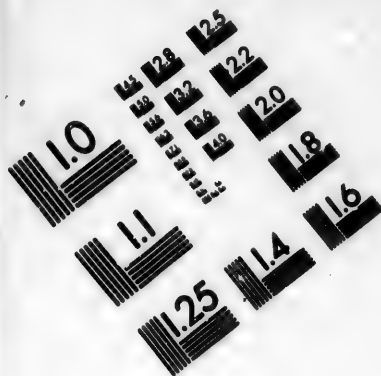
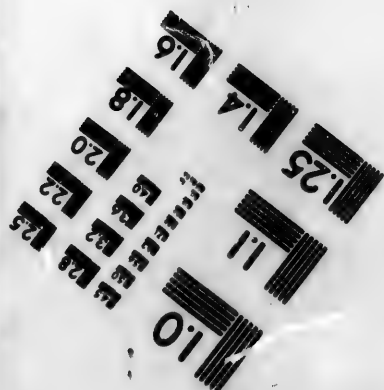
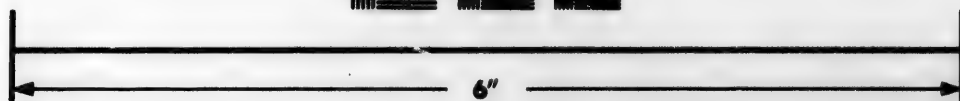
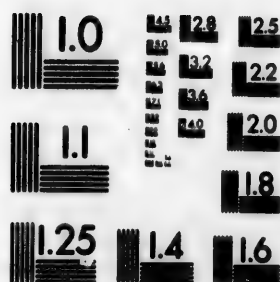


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The WINTER-MEW.

SIXTH SPECIES.

Larus Hybernus. Gmel.

Larus Canus, var. Lath. Ind.

Gabia Hyberna. Briss.

Larus Fuscus, seu *Hybernus.* Ray, &c.

Guaca-guacu. Marcgrave.

In Cambridge-shire, Cuddy-Moddy. Will.

WE suspect that this bird is no other than our spotted mew (*kittiwake*) which visits the inland parts of England during winter. We make this conjecture, because its bulk is the same, and its plumage similar, only brown where the other is gray : and it is well known that these birds when young have a darker cast, not to mention how easily the shades may be confounded in a description or drawing. If that of the British Zoology had been better, we could have spoken with more confidence. However, this Mew lives in winter on earth-worms, and when its stomach is overloaded, it disgorges them half-digested ; which is the origin of the *star-shot* or *star-gelly*.

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[A] Specific character of the Winter-Mew, *Larus Hybernus* :

"It is white; its top, the back of its head, and the sides of its neck, spotted; its back cinereous; the first of its wing-quills black; its tail marked with a black bar near the tip."—There is a passage in Morton's History of Northamptonshire, which, as it throws light on the œconomy of the Winter-Mew, and indeed on the nature of birds in general, deserves a place in this work.

"I shall here," says the intelligent author, "set down my remarks upon that *gelatinous* body called *star-gelly*, *star-shot*, or *star-fall'n*; so named because vulgarly believed to fall from a star, or to be the recrement of the meteor which is called the falling or shooting star, or rather the meteor itself shot down to the earth. It is generally a clear, almost sky-coloured, tremulous, viscid, or tenacious gelly; but in water glib and slippery. To the hand it is as cold as we generally say a frog is; and is apt to strike a chillness into it. 'Tis found in lumps or masses of a certain size. The largest I have seen was about the bigness of a goose egg. Those that are found fresh and new, are generally entire, very little, if at all, broken or dissolved: some of the masses are curled or convoluted somewhat like the *ileum*, or as a garden-snail appears when the shell is broken off from it. In consistence and colour, it pretty much resembles boiled starch, or rather a solution of *gum tragacanth*. I set some of this gelly on the fire in a silver vessel: it did not dissolve, as does cold boiled starch when it is set again upon the fire; but became thick and viscid; the more fluid or watery part of it having gone off in vapour. I let it stand till the humidity was all evaporated. To the bottom of the vessel adhered certain skins and vessels, like those of animal bodies. The inside of the porringer upon this operation exhibited a glistering like that of isinglass; and there proceeded from it a kind of greasy smell. Another experiment I made of the gelly broken and put into spring-water, which I set to seeth upon the fire, but not much of it dissolved. A piece of muslin being dipt into it so managed as with starch, was stiffened as with that. The gloss that it gave to the muslin might be rubbed off. The gelly being put into water, some of it subsided; some did not. In the pieces that floated I observed several bubbles, which I thought were formed by the water intruded into and retained in the pores of it.

"It is sometimes found with patches of a dirty yellow in it; sometime with black specks resembling little pellets of grumous blood. Breaking one of the lumps, I discovered and took out of it several pieces of tough skin, and of long tenacious string-like bo-

"dies.

“dies. Macerating another of these masses that I might clear the
 “strings, as I called them, from the softer or more pulpy part of the
 “gelly, I found them branched and distended through the whole
 “mass. The smaller branches in size and figure like capillary blood-
 “vessels of a blackish red. With these were broad pieces of a very
 “thin film or membrane. The mass, though a large one of the sort,
 “might be drawn up and suspended by these strings. The gelly,
 “when it has been kept for some time, becomes putrid, and has a
 “strong smell, like that of a dead carcase in a putrid state. Chickens
 “will eat it.

“This star-shot, as it is called, is very rarely to be met with on
 “the tillage-lands. At Oxendon, and in most other places, we find
 “it chiefly in the lower and moister ground, particularly on the
 “ledges of sod, upon the sides of trenches in meadows, upon and near
 “the banks of brooks or pools, on ant-hills and mould-banks now
 “and then in great plenty. It occurs sometimes in dry, barren, and
 “heathy ground. It does not appear for any number of years suc-
 “cessively in one and the same place. At Pisford, in January 1702,
 “was shown me a mass of star-gelly lying upon a dead hedge that
 “I am well assured had its first appearance there. The like has been
 “found upon a flat board at the top of a cherry-ladder, in Mr.
 “Courtman’s garden at Thorpe. The last in as compact a mass as
 “those upon the ground are usually found in.

“’Tis chiefly seen in misty mornings, and in wet weather, in au-
 “tumn, in winter, and early in the spring; seldom or never any that
 “is fresh and new in the time of frost, or in the summer months.

“In 1700, there was no star-gelly to be found about Oxendon,
 “till a wet week in the end of February, when the shepherds brought
 “me about thirty several lumps or masses of it.

“Applied to the running heels of horses, it has been found to be
 “of use; as also for pasting paper to pasteboard, glass, and the like.

“As to the origin of this body, it has in many particulars a near
 “analogy with animal substances; as the description of it plainly
 “shows. And by several other circumstances that are not men-
 “tioned, it appears to me to be on the disgorging or casting of
 “birds of three or four sorts; of the sort of fowl in particular
 “that at certain seasons do feed very plentifully upon earth-worms
 “and the like; and especially of the *sea-maw*, and the *winter-mew*
 “or *coddy-moddy*, birds of the gull kind, which are very ravenous.
 “The *coddy-moddies* come up into this country in great numbers at
 “the time this star-shot is generally found, viz. in the autumn and
 “the winter months: frequent those very places where it usually
 “occurs.

“ occurs, viz. moist meadows and the banks of brooks, more rarely
 “ ploughed lands; and greedily devour earth-worms, which in
 “ those places, and about that time of the year, are very nume-
 “ rous. They generally come up the vallies, where our brooks
 “ and rivers run, very early in the morning, even before the shep-
 “ herds or any body else are abroad in the fields; especially in foggy
 “ mornings and before a storm, in such seasons and in such weather
 “ as in a particular manner invite the earth-worms out of their
 “ holes and recesses up upon the surface: and the birds return
 “ again to seaward. In the month of September, 1708, I saw a
 “ *coddy-moddy* shot down to the ground, that on her fall upon the
 “ ground, when almost half-dead, disgorged a heap of half-digested
 “ earth-worms, much resembling the gelly called star-shot.

“ In fine, having compared the notes or marks of that disgorge
 “ or casting with those of the gelly, called star-shot, I found them
 “ so much alike, I am satisfied the latter is for the main the same
 “ origin as is the former. Some of these masses I take to be dis-
 “ gorged by herons and bitterns after having fed upon frogs, which
 “ they sometimes do. Sir William Craven once shot a bittern by
 “ one of Winwick pools, which after great heaving and working
 “ of her breast, at length discharged a quantity of this sort of gelly.
 “ The worthy Mr. Thomas Clerke, of Watford, assures me, that
 “ he has seen a mass of star-gelly, wherein appeared the head and
 “ other parts of a frog almost dissolved into a gelly, like to that
 “ which encompassed it. Having kept a parcel of frogs spawn
 “ some time by me, it had a smell very like that of corrupted star-
 “ shot. Others of them, it is not unlikely, are disgorged by crows,
 “ when they feed over-abundantly on earth-worms. The carrion
 “ crow will likewise feed upon frogs and toads too, pecking them
 “ into pieces, and so devouring them; whereas the herons, &c.
 “ swallow them whole. The gelly upon the dead hedge, and on the
 “ cherry-ladder, in the instances above-mentioned, I am apt to
 “ think came from crows or rooks. . . .

“ ’Tis usual with birds, the more ravenous sort especially, to cast
 “ up what is uneasy and burthensome to their stomachs. This is
 “ well known to those who are conversant and experienced in the
 “ business of ordering and managing of birds, especially hawks.
 “ We may reasonably suppose, that all other birds that have a
 “ membranous stomach, and voracious appetite, do the same upon
 “ any the like occasion; these in particular I have now mention-
 “ ed, namely, herons and bitterns, which have a membranous sto-
 “ mach, as have all the carnivorous birds: and the Winter-Mew,
 “ and

AFTER this enumeration of the species of Gulls and Mews well described and distinctly known, we shall mention a few others, which might probably be ranged with the preceding, if their indications were more complete.

1. That which Brisson calls *the little gray mew*, saying, that it is *equal in bulk to the great cinereous mew*; and which seems to differ from that species, or from that of the gray-mantled bill, because it has white mixed with gray on the back.

2. That great Sea-Mew, mentioned by Anderson, which preys on an excellent fish, called in Iceland *runmagen*. He tells us, that this bird carries it ashore, and eats only the liver; and that the peasants instruct the children to run up to the Mew as soon as it alights, and snatch from it the fish.

3. The bird killed by Mr. Banks, in the latitude of $1^{\circ} 7'$ north, and longitude $28^{\circ} 50'$, and which he terms the *black-footed gull*, or *larus crepidatus*. The excrements were of a bright red,

"and the carrion crow, whose stomachs are not furnished with such thick muscles, as are those of the granivorous birds. These, the *Winter-Mew* particularly, having glutted and overcharged their stomachs with earth-worms, or the like cold and viscid food, they cast it up again not duly dissolved; then especially when the earth-worms, &c. are a new or more uncommon sort of food to them. We have a parallel instance in some sorts of fishes, according to the curious and judicious Mr. Ray, who takes the *Balle Marine*, which are little round lumps (some of them as big as tennis-balls) of *festuca* amassed together, to be cast out of fishes' stomachs."

approaching that of the liquor contained in the *helix*, which floats on the sea; which renders it probable that the bird feeds on that shell-fish.

4. The Mew called by the inhabitants of the island of Luçon *taringting*, and which, from the character of vivacity ascribed to it, and its habit of running swiftly on the shore, may be either the little gray mew or the laughing mew.

5. The Mew of the lake of Mexico, called by the inhabitants *acuicuitzcatl*, and of which Fernandez says nothing more.

6. Lastly, a Gull observed by the Viscount de Querhoënt, in the road off the Cape of Good Hope, and which, from the account he obligingly communicated, must be a sort of the black-mantle, but its legs, instead of red, are sea-green.

The LABBE, or DUNG-BIRD.

Larus Crepidatus. Gmel.

Catarracta-Cephus. Will. and Ray.

Stercorarius. Briss.

Strund-jager, of the North.

The Black-toed Gull. Penn. and Lath.

CONSIDERING its size and figure, this bird might be ranged with the mews. But if it be of that family, it has lost all fraternal affection; for it is the avowed and eternal persecutor of its kindred, and particularly of the kittiwake. It keeps a steady eye on them, and when it perceives them betake to flight, it pursues without intermission. The people of the north report that its object is to obtain the excrements from those unhappy little mews; and they have, for that reason, called it *Strund-jager*, to which *Stercorarius* is synonymous. Most probably, however, this bird does not devour the dung, but only the fish which the kittiwakes drop from their bill or disgorge*: especially

* Some naturalists have alledged, that certain species of gulls pursue others for their excrements. I have done all that was in my power to ascertain this fact, which I was always averse to believe. I have frequently repaired to the sea-shore to make observations,

N^o 226



THE BLACK TOED GULL.

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especially as it catches fish itself, and also eats whale's blubber; and amidst the abundance of nourishment with which the sea supplies its inhabitants, it would be very strange if the Labbe was reduced to swallow what all the rest reject.

No person has better described these birds than Ghist, in the Memoirs of the Academy of Stockholm. "The flight of the Labbe," says he, "is swift and poised, like that of the gohawk. The strongest wind cannot hinder it from catching in the air the small fish thrown to it by the fishermen. When they

vations, and have discovered what give rise to the fable. It is this:

The gulls maintain with each other a perpetual contest about their carnage, at least the great and middle species: when one comes out of the water with a fish in its bill, the first which perceives it shoots down to snatch the prey; and if the fortunate plunderer hastens not to swallow the capture, it will be pursued in its turn by others still stronger, which strike it violently with their bill; it cannot avoid them but by escaping, or by repelling its enemy; and whether that the fish incumbers its flight, or that it is overcome with fear, or sensible that the fish is the sole motive of the pursuit, it quickly throws it up; the other, which sees it drop, catches it dextrously before it reaches the water, and seldom misses to receive it.

The fish appears always white in the air, because it reflects the light, and seems, by reason of the celerity of the flight, to drop behind the gull which vomits it. These two circumstances have deceived observers.

I have verified the same fact in my garden; I chased some large gulls shouting after them; they ran and disgorged the fish which they had just swallowed; I threw it to them, and they caught it in the air, with as much alertness as dogs. *Note communicated by M. Baillon, of Montreuil-sur-mer.*

" call *lab, lab*, it immediately repairs to receive
 " the fish, whether raw or dressed, or the other
 " food which is offered to it. It also takes the
 " herrings out of the busses, and if they are salt-
 " ed, it washes them before swallowing. One
 " can hardly approach it or fire upon it, un-
 " less some bait be thrown. But the fishermen
 " are kind to it, as it is an almost infallible
 " sign of a herring-shoal; and when the Labbe
 " does not appear, their success is small. This
 " bird is almost always on the sea; generally
 " two or three appear together, and very sel-
 " dom five or six. When it cannot find pro-
 " vision at sea, it comes to the beach and at-
 " tacks the mews, which scream on its appear-
 " ance: but it rushes on them, and overtaking
 " them, it alights on their back, and obliges
 " them to cast up the fish which they had just
 " swallowed. This bird, as well as the mews,
 " lays its eggs on the rocks; the male is
 " blacker and rather larger than the female *."

Though it is the Long-tailed Labbe to which
 these observations seem chiefly to apply, we con-
 ceive that they relate also to the species now
 under consideration, whose tail is fashioned so
 that the two middle feathers are the longest,
 but do not much exceed the others. Its bulk
 is nearly equal to that of the little mew, and its
 colour is dun cinereous, waved with gray-

* Collection Academique, *partie strangers*, tom. xi. p. 51.

ish:

ish * : the wings are very large, and the legs are formed as in the mews, only not quite so strong ; the toes are shorter. But the bill differs more from that of these birds, the end of the upper mandible being armed with a nail or hook that appears added ; a character in which the bill of the Labbe resembles that of the petrels, though the nostrils are not tubular.

The Labbe has, in the carriage of its head, something of the bird of prey, and its predatory life belies not its appearance. It walks with its body erect, and screams very loud : it seems, says Martens, to pronounce *i-ja* or *jaban*, when heard at a distance, and its voice resounds. Their mode of life necessarily disperses them ; and that navigator says, that they are rarely found together : he adds, that the species seemed not to be numerous, and that he met with few about Spitzbergen. The stormy winds of the month of November, 1779, drove two of these birds upon the coasts of Picardy : they were sent to us by M. Baillon, and from them we have made the preceding description.

* This colour is lighter below the body ; and sometimes, according to Martens, the belly is white.

{A} Specific character of the *Larus Crepidatus* : " Its two middle tail-quills are longer than the rest." It is found in the northern parts of Europe and America, and even on the Atlantic. It weighs eleven ounces ; its length is fifteen inches, and its alar extent thirty-nine. Linnæus says, that it lays two eggs, which are pale ferruginous, spotted with black.

The LONG-TAILED LABBE.

Larus Parasiticus. Linn. and Gmel.

Stercorarius Longicaudus. Briss.

Plautus Stercorarius. Klein.

Catarracta Parasitica. Brun.

The Arctic Bird. Edw.

The Arctic Gull. Penn. and Lath. *

THE production of the two middle feathers of the tail in two detached and diverging shafts, characterises this species, which is of the same bulk with the preceding. It has a black cap on the head; its neck is white, and all the rest of its plumage gray: sometimes the two long feathers of the tail are black. This bird was sent to us from Siberia, and we think that it is the same species with that found by Gmelin in the plains of Mangasea, near the banks of the river Jenisea. It occurs likewise in Norway, and even in Finmark and Angermania: and Edwards received it from Hudson's Bay, where, he observes, the English, no doubt on account of its hostilities against the mew, call it the *Man-of-war Bird*; a name beforehand applied;

* In Denmark it is called *Strondt-jager*, or *Schyt-walk* (dung-bird): in Sweden *Swart-lasse*; and in Angermania *Labben*: in Norway *Kyuffwa* or *Tjuswa*.

and with better reason, to the frigate. That author adds, that, from the length of its wings and the weakness of its legs, he should have judged that this bird lived more flying at sea than walking on land: yet, he remarks, the feet are as rough as a file, and proper to cling to the slippery backs of large fishes. Edwards entertains the same opinion with us, that the Labbe, by the form of its bill, is intermediate between the mews and petrels.

Briffon reckons a third species of Labbe, the *Stercorarius Striatus* *; but, as it is founded on Edwards' description, who regarded it as the female of the Long-tailed Labbe, we cannot adopt it. We also are of opinion, that it is only a variety from age or sex; and we even suspect that our first species might perhaps admit the same arrangement. In that case, we should have only one kind of Labbe, of which the adult or male would be that with two long feathers in the tail, and the female would be that represented by Edwards; the mantle deep ash-brown on the wings and tail, with the fore side of the body of a dirty white gray; the thighs, the lower belly, and the rump, crossed with blackish and brown lines.

- "Above brown; the feathers edged at the tip with tawny;
- "below dirty white, striped transversely with brown; its head
- "brown; its throat whitish brown; its tail-quills white at their
- "origin, and deep brown the rest of their length." *Briffon.*

[A] Specific character of the *Larus Parasiticus*: "Its two middle tail-quills are very long."

The A N H I N G A.

Plotus Anbinga. Linn. and Gmel.*The White-bellied Dartier.* Lath.

IF regularity of form in animals, and symmetry of proportion, strike us as graceful and beautiful, and if the rank which we assign them corresponds to the feelings they excite; nature knows not such distinctions. She loves them because they are the children of her creation; and her attachment requires no other plea. She cherishes alike in the desert the elegant *gazel* * and the shapeless camel; the pretty musk † and the gigantic *giraff* ‡: she launches into the air at once the magnificent eagle and the hideous vulture; and she conceals under the earth and in the waters generations innumerable of insects, fashioned in every fantastic shape. All varieties of figure and structure she admits, provided they are suited to the subsistence and propagation of the kind. The *mantes* live under the form of a leaf: the sea-urchins are imprisoned within a spherical shell: the vital juices filter and circulate

* *Antelope-Dorcas.* Linn. *The Barbarian Antelope.* Penn,

† *Moschus Pygmaeus.* Linn. *The Guinea Musk,* Penn.

‡ *Camelopardalis-Giraffa.* Linn. *The Camelopard.* Penn.

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THE WHITE-BELLIED AUKLING.

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through the branches of the *asterias*. The head of the *zygæna* is flattened into a hammer; and the whole body of the moon-fish is rolled into a spiny globe. And do not a thousand other productions of figures equally strange demonstrate, that the universal mother has aimed at diffusing animation, and of extending it to all possible forms? Not content with varying the traces and shades of the original pictures, does not she seem solicitous to draw communicating lines from each genus to all the others; and thus, from her rudest sketches to her most finished performances, all are connected and interwoven? Thus we have seen that the ostrich, the cassowary, and the dodo, by the shortness of their wings, the weight of their body, and the largeness of the bones of their legs, form the shade between the quadrupeds and the birds: the penguins are a-kin to the fish: and the Anhinga, the subject of this article, exhibits a reptile grafted on the body of a bird. Its excessively long and slender neck, and its small cylindrical head, rolled out like a spindle, of the same girth with the neck, and drawn out into a long sharp bill, resemble both the figure and the motion of a snake, whether the bird nimbly extends its head to fly from the tops of trees, or unfolds it and darts it into the water to pierce the fishes.

These singular analogies have equally struck all who have observed the Anhinga in its na-

tive country * (Brazil and Guiana) ; they strike us even in the dried specimens of our cabinets. The plumage of the neck and head does not alter its slender shape ; for it is a close down, shaven like velvet : the eyes are of a brilliant black, with the iris golden, and encircled by a naked skin : the bill is jagged at the tip with small indentings turned backwards. The body is scarcely seven inches long, and the neck alone measures double.

The extreme length of the neck is not the only disproportion that strikes us in the figure of the Anhinga. Its large and broad tail, composed of twelve spread feathers, differs no less from the short round shape which obtains in most of the swimming birds : yet the Anhinga swims, and even dives, only holding its head out of the water, in which it plunges entirely on the least suspicion of danger : for it is very wild, and can never be surprized on land. It keeps constantly on the water, or perched on the tallest trees, by the sides of rivers and in overflowed savannas. It builds its nest on these trees, and repairs among them to pass the night. Yet it is entirely palmated, its four toes being connected by a single piece of membrane, and the nail of the middle one serrated within. These coincidences of structure and habits seem to indicate an affinity between the Anhinga and the cormorant

* Marcgrave.—Barrere.

and

and boobies; but its small cylindrical head, and its bill drawn out to a point, without any hook, distinguish it from these two kinds of birds.— The skin of the Anhinga is very thick, and the flesh commonly fat, but has a disagreeable oily taste: Marcgrave found it to be no better than that of the gull, which is surely very bad.

None of the three Anhingas figured in our *Planches Enluminees* exactly resembles that described by Marcgrave. N° 960 has, like that naturalist's, the upper side of the back dotted, the end of the tail fringed with gray, and the rest of a shining black: but all the body is black, the head and neck are not gray, and the breast is of a silvery white. N° 959 has not the tail fringed *. Yet we think that these two birds, which were brought from Cayenne, are really of the same species with the Brazilian Anhinga, described by Marcgrave; the differences of colours not exceeding what, in the plumage of the water birds especially, might result from age or sex. Marcgrave remarks too, that the nails of his Anhinga were reflected and very sharp, and that it uses them to catch fish; that its wings are large, and reach,

* *Plotus Melanogaster.* Gmel.

The Black-bellied Anhinga. Penn.

The Black-bellied Darter. Lath.

Specific character: "Its head is smooth; its belly black."

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when closed, to the middle of its long tail. He seems, however, to over-rate its bulk in comparing it to the duck. The Anhinga which we know, may be about thirty inches, or even more, from the tip of the bill to the end of the tail: but this large tail and its long neck occupy the largest share of this measure, and its body does not appear to exceed that of a morillon.

[A] Specific character of the *Platus Anhinga*: "Its head is smooth; its belly white."

The R U F O U S A N H I N G A.

Anhinga Melanogaster, var. 3. Gmel.

WE have seen that the Anhinga is a native of South America, and, notwithstanding the possibility that such a bird, furnished with long wings, might traverse the ocean, like the cormorants and the boobies, I should have restricted it to those countries; nor would the denomination merely of Senegal Anhinga have altered my opinion, had not a note of Adanson, accompanying a specimen, assured us, that a species of Anhinga inhabits the coast of Africa, where the people of the country call

RUFIOUS ANHINGA. 411

it *kandar*. This Senegal Anhinga differs from those of Cayenne, because its neck, and the upper side of its wings, are of a rufous fulvous, marked by pencils on a dark brown ground, the rest of the plumage being black. Its figure, its port, and its bulk, are exactly the same as in the American Anhingas.

The S H E A R B I L L.

LE BEC-EN-CISEAUX. *Buff.**Rhynchops Nigra.* Linn. and Gmel.*Rygcbofsalia,* Briff.*The Cutwater.* Catesby.*The Black Skimmer.* Penn. and Lath.

THE mode of life, the habits, and œconomy of animals, are not so free as might be supposed. Their actions result not from inclination and choice, but are the necessary effects of their peculiar organization and structure. Nor do they seek ever to infringe or evade the law of their constitution: the eagle never abandons his rocks, or the heron her shores: the one shoots down from the aerial regions, to plunder or murder the lamb, founding his prescriptive right on his strength, his armour, and his habitual rapine; the other, standing in the mire, patiently expects the glimpse of its fugitive prey. The woodpecker never forsakes the trees, round which he is appointed to creep. The snipe must for ever remain in its marshes; the lark in its furrows, and the warbler in its groves. All the granivorous birds seek the inhabited countries, and attend on the progress of cultivation. While those

N^o 228



THE BLACK SKIMMER.

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those which prefer wild fruits and berries, perpetually fly before us, and cherish the wilds, and forests, and mountains: there, remote from the dwellings of man, they obey the injunctions of nature. She retains the hazel grouse under the thick shade of pines; the solitary blackbird under his rock; the oriole in the forests, which resound with its notes; while the bustard seeks its subsistence on the dry commons, and the rail in the wet meadows. Such are the eternal, immutable decrees of nature, as permanent as their forms: these great possessions she never resigns, and on these we vainly hope to encroach. And are we not continually reminded of the weakness of our empire? She obliges us even to receive troublesome and noxious species: the rats make a lodgment in our houses, the martins in our windows, the sparrows in our roofs; and when she conducts the stork to the top of our old ruinous towers, already the habitation of the mournful family of nocturnal birds, does she not hasten to resume the possessions which we have usurped for a time, but which the silent lapse of ages will infallibly restore to her?

Thus the numerous and diversified species of birds, led by instinct, and confined by their wants to the different districts of nature, have apportioned among themselves the air, the earth, and the water. Each holds its place, and enjoys its little domain, and the means of subsistence, which the extent or defect of its faculties will

will augment or abridge. And as all the possible gradations in the scale of existence must be filled up, some species, confined to a single mode of support, cannot vary the use of those imperfect instruments which nature has bestowed on them. Thus the spoonbill seems formed for gathering shell-fish: the small flexible strap and the reflected arch of the avoset's bill, reduce it to live on fish-spawn: the oyster-catcher has an ax-shaped bill, calculated for opening the shells: and the crossbill could not subsist, were it not dextrous in plucking the scales from the fir-cones. Lastly, the *Shearbill* could neither eat sidewise, nor gather food, nor peck forwards; its bill consisting of two pieces extremely unequal, the lower mandible, being long and extended disproportionately, projects far beyond the upper, into which it falls like a razor into its haft*. To catch its prey with this awkward and defective instrument, the bird is obliged to fly, skimming the surface, and with its lower mandible cutting the water. By this necessary and laborious exertion, the only one it can perform, it shovels up the fish, and earns its subsistence†. Hence some observers have called it *cutwater*: the name *Shearbill* (*bec-en-ciseau*) is derived from

* Ray.

† They feed on small fish, which they catch flying where the water is shallow; they keep their lower mandible almost always in the water, and when they feel a fish they close both mandibles, which may be termed the blades. *Memoirs on the Natural History of Guiana, communicated by M. de la Borde, king's physician at Cayenne.*

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the structure of its bill; the lower mandible being hollowed out by a channel, and furnished with two sharp ledges, receives the upper one, which is flattened like a blade.

The point of the bill is black, the part next the head is red, and so are the feet, which have the same structure as those of the gulls. The Shearbill is nearly equal to the little cinereous mew: the whole upper surface of the body, the fore side of the neck, and the front, are white: it has also a white streak on the wing, some of whose quills, and also the lateral ones of the tail, are partly white: all the rest of the plumage is black, or blackish brown: in some subjects it is simply brown, which appears to indicate a variety from age*; for, according to Catesby, the male and female are of the same colour.

These birds are found on the coasts of Carolina and of Guiana; on the latter they are numerous, and appear in flocks, almost always on wing, and only alight in the mire. Though their wings are very long, their flight is remarked to be slow†: if it were swift, they could not distinguish and raise their prey, as they rushed along

* *Rynchops Fulva*. Linn.

Specific character: "It is fulvous, its bill black." However, Gmelin reckons it only a variety.

† *Memoirs communicated by M. de la Borde.*

the surface of the water. According to the observations of M. de la Borde, they come in the rainy seasons to nestle on the islets, and particularly the *Grand Connetable*, near the shores of Guiana.

The species seems peculiar to the American seas; nor can we extend it to the East Indies, because Ray's continuator mentions a drawing sent from Madras, but which was perhaps made elsewhere. We are also of opinion, that the sheerwater of the South Sea, so often mentioned by Captain Cook, is not the same with the Shearbill of Cayenne, though they have received the same name: for, besides the immense difference between the hot climate of Cayenne and the pinching colds of the South Seas, it appears, from two passages of his narrative, that his sheerwaters were petrels*, and that they occur in the higher latitudes, and even on the frozen islands with the albatrosses and penguins†.

* "We now began to see some of that sort of petrels so well known to sailors by the name of sheerwaters, latitude $58^{\circ} 10'$ S. longitude $50^{\circ} 54'$ E." *Second Voyage*, vol. i. p. 45.—"We had another opportunity of examining two different albatrosses, and a large black species of sheerwater, *Procellaria Equinoxialis*: we had now been nine weeks out of sight of land." *Idem*.

The sheerwater is the same with the puffin, which will afterwards be described, and which is in fact a species of petrel.

† "We were in the midst of the ice (in $61^{\circ} 51'$ S. and 95° E.); we had but few birds about us; they were albatrosses, blue petrels, and sheerwaters." *Cook*.—"During our run among the ice islands, the

" the pintadoes and the sheerwaters occurred in smaller numbers,
" but the penguins began to appear." *Cook*.—" As the weather
" was often calm, Mr. Banks went into the boat, to shoot birds, and
" he brought some albatrosses and sheerwaters; the latter were
" smaller than those which we saw in the straits of Le Maire, and had
" a deeper colour on the back." *Cook's First Voyage*.—" Sheerwaters
" are seen along the coast of Chili." *Carteret*.

[A] Specific character of the Black Skimmer, *Rynchops Nigra*:
" It is blackish, below white, its bill red at the base."

The N O D D Y.

Sterna Stolidus. Linn. and Gmel.*Gavia Fusca.* Briss.*Passer Stultus.* Nieremb. Johnst. Will. and Charl.

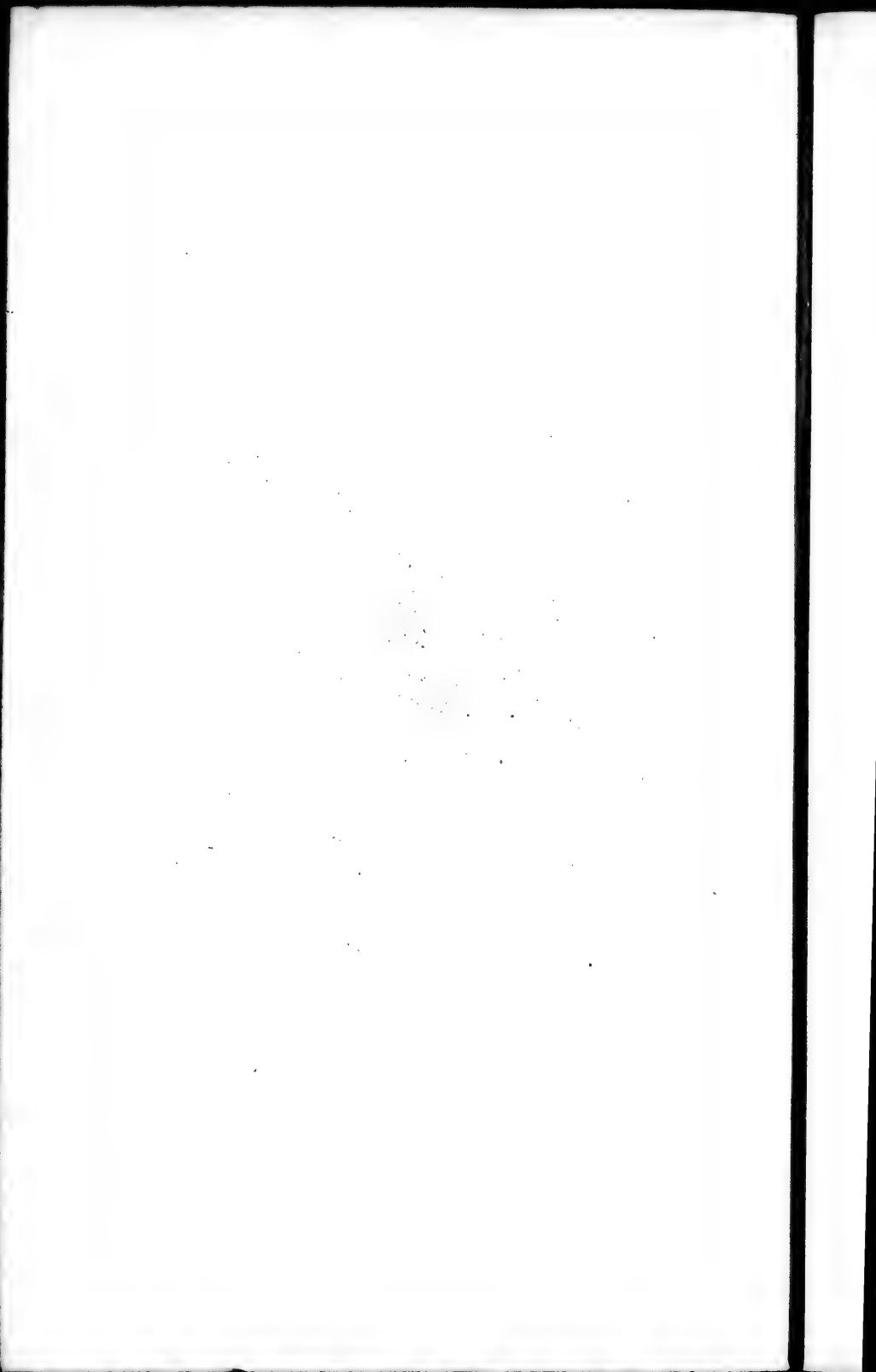
MA N, who rules with haughty sway on land, is scarce known in another great division of nature's vast empire. On the stormy face of the seas, he finds enemies of superior force, obstacles that baffle his art, and dangers that exceed his courage. When he dares to pass those barriers of the world, all the elements combine to punish his audacity, and nature reclaims that dominion which he vainly aspires to usurp; there he is a fugitive, not a master. If he disturbs the inhabitants, if he ensnares or transfixes some unhappy victims, the bulk of them, safe in the bosom of the abyss, will in some future period see the winds and storms, and piercing colds, sweep from the face of the ocean its troublesome and destructive guests.

In fact the animals, which nature, though with feeble faculties, has fortified against the billows and the tempests, know not our dominion. Most of the sea-birds suffer us to approach them, and even to seize them, with a degree of unconcern that appears to border on stupidity, but which clearly

Pl^{te} 229



THE NODDY.



clearly evinces that man is to them a new and strange being, and that, far removed from his controul, they enjoy full and entire liberty. We have already seen several instances of that apparent weakness, or rather profound security, which characterizes the winged inhabitants of the ocean. The Noddy, of which we now treat, has been termed the *foolish sparrow* (*passer stultus*); a very inaccurate denomination, since the Noddy is not a sparrow, but resembles a tern or little mew, and, in fact, forms the gradation between these two kinds of birds: for it has the feet of the mew, and the bill of the tern. All its plumage is dark brown, except a white space, like a cowl, on the top of the head. Its bulk is nearly equal to that of the common tern.

We have adopted the name *Noddy* (Noddi) which occurs frequently in English voyages *, because it expresses the stupidity, or silly confidence, with which the bird alights on the masts and yards of ships † and even on the sailors' hands ‡.

* Particularly in those of Dampier and Cook.

† These are stupid birds, which, like the boobies, allow themselves to be caught by the hand, on the yards and the rigging of the vessel, on which they alight. *Catesby*.

‡ The *Tbouarous* (the name of the Noddies in Cayenne) come to fish on very ample space, in company with the frigats; I never saw them alight on the water, like the gulls; but at night they come roving about the vessels to find repose, and the sailors catch them by lying on the top of the stern, and stretching out their hand, upon which the birds make no scruple to alight. *Memoirs communicated by M. de la Borde, king's physician at Cayenne.*

The species seems not to extend much beyond the tropics*; but is very numerous in its haunts. "At Cayenne," says M. de la Borde, "there are an hundred Noddies for one "booby, or man-of-war bird: they particularly "cover the rock of the *Grand Connetable*, "whence they come to fly about the vessels; "and when a cannon is fired, they rise embodied in a thick cloud." Catesby also saw them in great numbers, flying together, and dropping continually on the surface of the sea, to catch the little fish, shoals of which are impelled by violent winds. The birds seem to perform their part with great alacrity and cheerfulness, if we judge from the variety of their cries, and their great noise, which may be heard some miles. "All this," adds Catesby, "has "place only in the breeding season, when they "lay their eggs on the naked rock†: after "which

* *Catesby*.—Noddies and egg-birds (which seem to be a kind of tern) in $27^{\circ} 4'$ south latitude, and $103^{\circ} 56'$ west longitude, about the beginning of March. *Cook*.—On the 28th February, in $33^{\circ} 7'$ south latitude, and $102^{\circ} 33'$ west longitude (in sailing towards the tropic) we began to see flying fish, egg-birds, and Noddies, which are said not to go above sixty or eighty leagues from land; but of this we have no certainty. No one yet knows to what distance any of the oceanic birds go to sea; for my own part, I do not believe that there is one in the whole tribe that can be relied on, in pointing out the vicinity of land. *Idem*.—The Noddies are seen more than an hundred leagues from land. *Catesby*. (The egg-bird of Cook is the same with the Noddy of Dampier, and is the sooty tern, *Sterna Fuliginosa*, already described).

† On those of Bahama. *Catesby*.—On the isle of Rocca. *Dampier*.—

“ which each Noddy ranges at large, and roves
“ solitary on the vast ocean.”

pier.—On the south side of St. Helena, by several small islets, which are properly but rocks, where we see thousands of black gulls, whose eggs, which are very good eating, were laid on the bare rock. The multitude of these birds was such, that we took thousands of them, and they suffered themselves to be knocked down with sticks; whence, no doubt, they have been called *foolish gulls*. *Recueil des Voyages de la Compagnie des Indes Orientales.*

[A] Specific character of the Noddy, *Sterna Stolida*: “ Its body
“ is black, its front whitish, its eye-brows intense black.”

The AVOSET.

L' AVOCETTE. Buff.

Recurvirostra-Avocetta. Linn. and Gmel.

Avocetta. Gefner, Aldrov. Johnst. Will. Briss. &c.

Recurvirostra. Rzaczynski, Barreire; &c.

Plotus Recurviroster. Klein.

The Scooper. Charleton.

The Crooked-bill. Dale and Plott.

The Scooping Avocet. Penn. and Lath. •

THE webbed birds have, for the most part, short legs. Those of the Avocet are very long; and this disproportion, which would almost alone distinguish it, is attended with a character still more singular, that is, the inversion of its bill, which is bent into an arc of a circle, whose centre lies above the head: the substance of the bill is soft and almost membranous at its tip †; it is thin, weak, slender, compressed horizontally, and incapable of defence and effort. It is one of

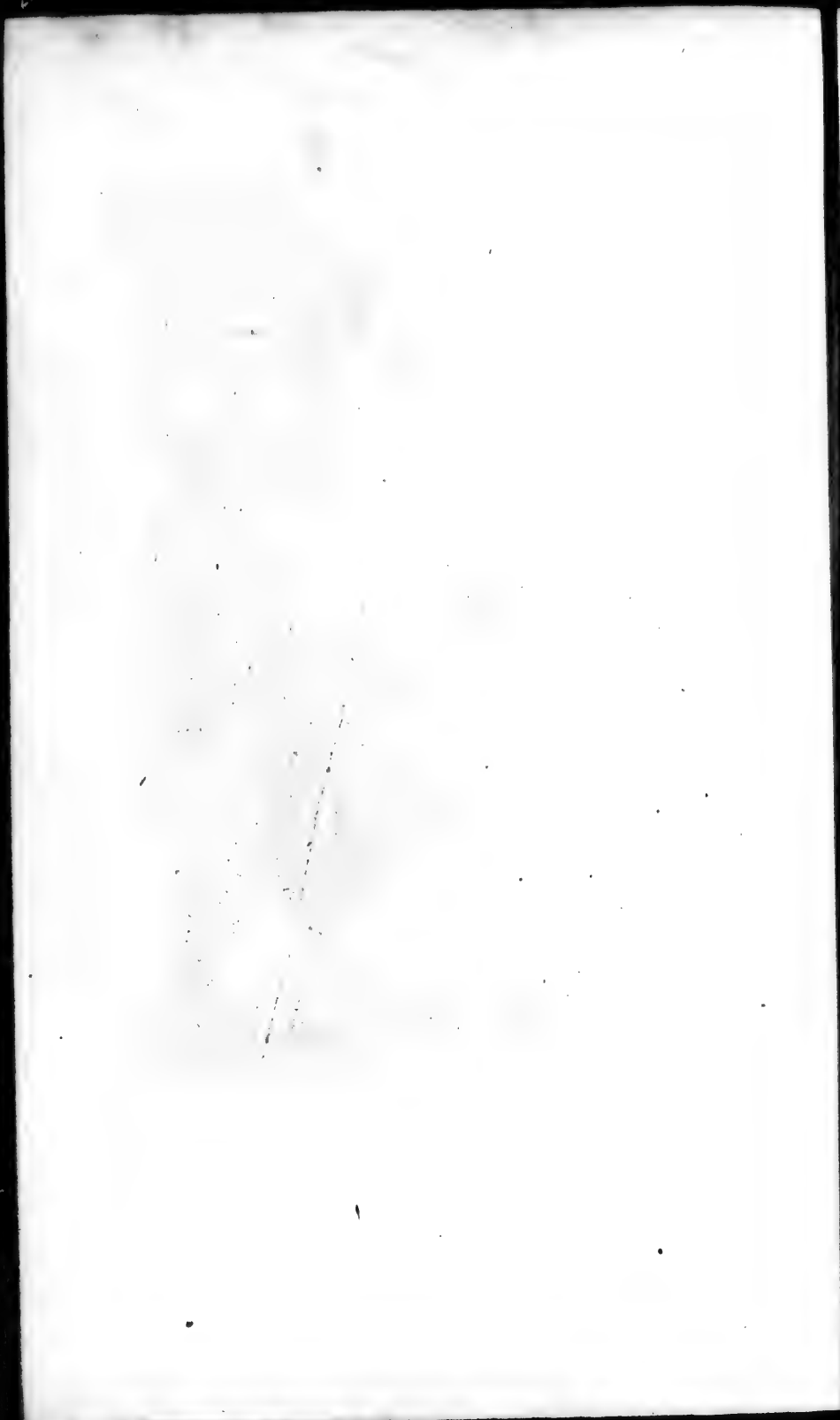
• The word *Avocetta* is of Italian origin; the bird has also in Italy the names *Beccotorto* and *Beccorella*, expressive of its crooked bill; and on Lake Maggiore it is called *Spinzago d' Aqua*, to distinguish it from the curlew, which is termed simply *Spinzago*. In Germany it is styled *Frembder Wasser Vogel* (foreign water bird), and *Schabel* or *Schnabel*; and in Austria *Krambschabl*: in Sweden *Skiaër-fläcka*: in Danish *Klyde*, *Lanfugl*, *Forkært*, *Reguspove*: in Turkey *Zeluk* or *Keluk*.

† Linnaeus.

N^o 230



THE SCOOPING AVOSSET.



those errors or essays of nature, which if carried a little farther would destroy itself; for if the curvature of the bill were a degree increased, the bird could not procure any sort of food, and the organ destined for the support of life would infallibly occasion its destruction. The bill of the Avoset may therefore be regarded as the extreme model which nature could trace, or at least preserve; and for that reason it is the most distant from the forms exhibited in other birds.

It is even difficult to conceive how this bird feeds by help of an instrument that can neither peck nor seize its prey, but only rake in the softest mud. It seems to employ itself in searching the froth of the waves for fish-spawn, which appears to be its chief support. It probably eats worms also; for its bowels contain a glutinous substance, fat to the touch, of a colour bordering on orange yellow, in which are some vestiges of fish-spawn and aquatic insects. This gelatinous mass is always mixed in the stomach with little white crystalline stones*: sometimes in the intestines there occurs a gray or earthy green matter, which seems to be the slimy sediment which fresh waters, swelled by rains, deposit on their bed. The Avoset frequents the mouths of rivers and streams†, in preference to other parts of the sea-shore.

* Willughby says, that he could find nothing else.

† At least in Picardy, where these observations were made. (In England also, at the mouth of the Severn.)

This bird is somewhat larger than the lap-wing: its legs are seven or eight inches high; its neck is long, and its head round; its plumage is snowy white on all the fore side of the body, and intersected with black on the back; the tail is white, the bill black, and the feet blue.

The Avoset runs by means of its long legs on bottoms covered with five or six inches of water: but in deeper parts, it swims, and in all its motions it appears lively, alert, and volatile. It stays but a short while in the same place; and in its passages to the coast of Picardy, in April and November, it often disappears the morning after its arrival: so that sportsmen find great difficulty to kill or catch a few. They are still more rare in the inland country: yet Salerne says, that they have been seen to advance pretty high on the Loire. He assures us, that they are very numerous on the coasts of Low Poitou, where they breed*.

It appears from the route which the Avosets hold in their passage, that, on the approach of winter, they journey towards the south, and return in the spring to the north: for they occur in Denmark †, in Sweden, on the southern

* The Avoset is very rare in the Orleanois . . . On the contrary, nothing is more common on the coasts of Lower Poitou; and in the breeding season, the peasants take their eggs by thousands to eat: when driven off its nest, it counterfeits lameness as much or more than any other bird. *Salerne.*

† Muller and Brunnich.

point of the isle of Oëland*, on the eastern coasts of Great Britain†. Flocks of them arrive also on the western shore of that island, but remain no longer than a month or two, and retire when the cold sets in‡. These birds only visit Prussia||; they very seldom appear in Sweden; and, according to Aldrovandus, they are not more frequent in Italy, though well known there, and justly named §. Some fowlers have assured us, that their cry may be expressed by the syllables, *crex, crex*. But we cannot, on such slender authority, infer, that the Avoset is the same with the *crex* of Aristotle:—"For the *crex*," says the philosopher, "*wages war against the oriole and the blackbird*. And the Avoset can certainly have no quarrel with two birds which inhabit the woods. Besides, the cry, *crex, crex*, belongs equally to the jaducka snipe and the land rail.

In most of the Avosets there is dirt on the rump, and the feathers seem worn off by rubbing. Probably these birds wipe their bill on their feathers, or lodge it among them when they sleep; since the form seems as cumbersome to be disposed during rest, as awkward for action, unless, like the pigeon, it lays its head on its breast during repose.

* Linnaeus.

† Ray.

‡ Charleton.

|| Rzaczynski.

§ *Beccotorto*; i. e. twisted-bill.

The observer * who has communicated these facts is persuaded, that the Avoset is at first gray, and he adopts this opinion because many of those which arrive in November have the tips of their scapular feathers gray, as well as those of the rump: but these feathers, and those which cover the wings, preserve longest the livery of their birth: the dull colour of the great quills of the wings, and the pale tint of their legs, which in the adults are of a fine blue, leave no doubt but the Avosets whose plumage is mixed with gray are young ones. There are few exterior differences in this species between the male and female: the old males have much black, but the old females have nearly the same; only the latter seem to be smaller, and the head of the former rounder, with the fleshy tubercle that rises under the skin, near the eye, more inflated. We ought not to admit varieties into the species; though the Avosets of Sweden, according to Linnæus, have the rump black; which is white in the multitudes that inhabit a certain lake in Lower Austria, as Kramer remarks.

Whether from timidity or address, the Avoset shuns snares, and is very difficult to take †. The species is no where common, and seems to contain few individuals.

* M. Baillon, of Montreuil-sur-mer.

† "I have practised every possible stratagem to take these birds, but could never succeed." *Observations communicated by M. Baillon.*

[A] Specific character of the Scooping Avoset, *Recurvirostra Avocetta*: "It is variegated with black and white." The Avosets are frequent on the eastern shores of Great Britain in winter; they also visit the mouth of the Severn, and sometimes the pools of Shropshire. They feed on the worms and insects which they scoop out of the sand, which often shews the marks of their bill. They lay two white eggs, as large as a pigeon's, of a greenish hue, with large spots of black. They are common in Tartary, about the Caspian sea.

The RUNNER.

LE COUREUR. *Buff.*

Corrira Italica. Gmel.

Corrira. Briss.

Trochilus. Aldrov. Johnst. Will. Ray, and Charleton.

The Italian Courier. Lath.

ALL the birds which swim, and whose toes are connected by membranes, have the leg short, the thigh contracted, and often partly concealed under the belly. Their feet constructed and disposed like broad oars, with a short handle, and in an oblique position, seem expressly calculated for impelling the little animated ship: the bird is at once the vessel, the rudder, and the pilot. But amidst this grand fleet of winged navigators, three species form a separate squadron: their feet are indeed furnished with membranes like the other swimming birds, but they are at the same time raised on tall legs, and, in this respect, resemble the waders. Thus they form the intermediate gradation between two very different classes.

These three birds with tall legs and palmated feet are the avoet, the flamingo, and the Runner, so called according to Aldrovandus, because

cause it runs swiftly along the shores. That naturalist, to whom alone we are indebted for the account of this bird, tells us, that it is not rare in Italy. But it is unknown in France, and in all probability it occurs in no other country of Europe, at least it is very uncommon. Charle-ton says, that he saw one, without mentioning whence it came. According to Aldrovandus, the thighs of this bird are short in proportion to the length of its legs: the bill is yellow throughout, but black at the tip; it is short, and does not open much: the mantle is iron gray, and the belly white: two white feathers with black points cover the tail. This is all that the naturalist informs us; he adds nothing about its measures; but, if we judge from his figure, they are nearly the same with those of the plover.

Both Aristotle and Athenæus speak of a bird that runs swiftly, and which they term *trochilos*, saying, that "it comes in calm weather, to seek its food on the water." But is this bird a palmiped and swimmer, as Aldrovandus asserts, while he refers to it his courier; or is it not, as Ælian hints, a wader of the kind of gallinules or ringed plovers? It seems difficult to decide, from the scanty information transmitted from the ancients. All that we can gather is, that this *trochilos* is an aquatic bird; and with some probability Ælian refers to it the report of antiquity, that it entered boldly the jaws of the crocodile

crocodile to eat the leeches, and warn it of the approach of the *ichneumon*. This fable has been applied the most absurdly imaginable to the gold-crested wren, from a confusion of names, that little chorister being often termed *trochilos*, because of its whirling flight.

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N^o 231



THE RED FLAMINGO.

The RED FLAMINGO.

LE FLAMMANT, ou LE PHÉNICOPTÈRE.
Buff.

Phœnicopterus Ruber. Linn. and Gmel.

Phœnicopterus. Gefner, Aldrov. Johnst. Ray, Briss. &c. *

THE name *Phœnicopterus*, applied by the Greeks, and adopted by the Romans, expresses the striking feature of this bird—the crimson colour of its wings. But this is not the only remarkable character of the bird: the bill is flattened with a sudden bend above, thick and squared below, like a broad spoon; its legs are excessively tall; its neck is long and slender; its body is more elevated, though smaller, than that of the stork, and presents a singular and conspicuous figure among the great waders.

* In Greek *Φοινικεπίπτερος*, from *φοινίξ*, the Phœnician dye, and *πίπτερος*, a wing. And hence this name has, in the modern languages, been translated by words denoting flame-colour. In Portuguese *Flamingo*: in Spanish *Flamenco*: in French *Flambant* or *Flammant*; which, as Buffon says in the text (we have omitted the passage) was afterwards written *Flamand* (*Flemish*); and, by this ridiculous mistake, the bird was imagined to be a native of Flanders. In France it was anciently called *Becharn*, because its bill resembles a plough-share (*fac de charrue*). In Cayenne it has the name *Tokoko*.

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Those large semi-palmated birds, which haunt the sides of waters, but neither dive nor swim, are judiciously reckoned by Willughby distinct and independent species: for the Flamingo in particular seems to form the gradation between them and the class of the great swimmers, which it resembles by its half-webs, and because the membrane stretched between the toes recedes in the middle by two scallops. All the toes are very short, and the outer one extremely little: the body also is small in proportion to the length of its wings and neck. Scaliger compares it to that of the heron, and Gesner to that of the stork; remarking, as well as Willughby, the excessive length of the slender neck. "When the Flamingo has attained its full growth," says Catesby, "it is not heavier than a wild duck, and is yet five feet high." These great differences in size, noticed by authors, have a reference to the age as well as to the varieties which they have also remarked in the plumage. This is generally soft and silky, and washed with red tints of greater or less vivacity and extent: the great quills of the wing are constantly black: the coverts, both the greater and lesser, the exterior and interior, are imbued with fine flame-colour; which spreads and dilutes by degrees over the back and the rump, the breast and the neck; on the upper part of which, and on the head, the plumage is a

shaven and velvet down. The top of the head is naked; the neck is very slender, and the bill is broad; so that the bird has an uncommon appearance. Its skull seems to be raised and its throat dilated before, to receive the lower mandible, which is very broad at its origin. The two mandibles form a round and straight canal as far as their middle; after which the upper one bends suddenly, and its convexity changes into a broad surface: the lower mandible reflects proportionally, but always preserves the shape of a broad gutter; and the upper one, by a small curvature at its point, applies to the extremity of the lower mandible. The sides of both are beset internally with a small black indenting, whose points are turned backwards. Dr. Grew, who has described this bill with great accuracy, remarks also a filament within, under the upper mandible, and which divides it in the middle. It is black from its tip to where it bends, and from thence to the root it is white in the dead bird, but, in the living subject, it seems liable to vary; since Gesner asserts, that it is of a bright red, Aldrovandus that it is brown, Willughby that it is blueish, and Seba that it is yellow. "To a small round head," says Dautertre, "is joined a large bill four inches long, half red, half black, and bent into the form of a spoon." The Academicians, who have described this bird under the name of *Bécharu*,

say, that its bill is of a pale red, and contains a thick tongue edged with fleshy *papillæ*, turned backwards, which fills the cavity or the large spoon of the lower mandible. Wormius also describes this extraordinary bill; and Aldrovandus remarks how much nature has sported in its conformation: Ray speaks of its strange figure. But none of them have examined it with such attention as to decide a point which we should be glad to ascertain, viz. whether, as many naturalists alledge, the upper mandible is moveable, while the lower is fixed.

Of two figures of this bird, published by Aldrovandus, and sent to him from Sardinia, the one expresses not the characters of the bill, which are accurately portrayed in the other. And we must remark by the way, that in our plate the swelling and flattening of the bill are too faint, and that it is represented too much pointed.

Pliny seems to class this bird with the storks, and Seba has injudiciously supposed that the *phænicopterus* was ranked by the ancients with the ibis. But it belongs to neither of these kinds: it forms a separate division. And besides, when the ancients placed together analogous species, they did not follow the narrow views, or adhere to the scholastic methods, of our nomenclators; they observed in nature certain resemblances of habits and faculties, which they conjoined in the same group.

We may reasonably wonder that the name *phœnicopterus* occurs not in Aristotle, though mentioned by Aristophanes, who ranges it among the marsh birds *. But it was rare and perhaps foreign in Greece. Heliodorus † expressly says, that the *phœnicopterus* inhabited the Nile: the old scholiast on Juvenal ‡ asserts, that it was frequent in Africa. Yet these birds seem not to remain constantly in the hottest climates; for some are found in Italy, and a much greater number in Spain §. It is only a few years since several of them arrived on the coasts of Languedoc and Provence, particularly near Montpellier and Martigues ||, and in the fens near Arles ¶. I am therefore astonished that so well-informed an observer as Belon should assert, that none are ever seen in France, but such as had been carried thither. Did this bird extend its migrations first to Italy, where it was anciently foreign, and thence to the French coasts?

It inhabits, we see, the countries of the south, and is found from the coasts of the Mediterranean to the extremity of Africa **. Great

* *Λιμναίος.*

† *Æthiopic. lib. vi.*

‡ *Sat. xi. 139.*

§ *Belon.*

|| *Lifter, Annot. in Apicium, lib. v. 7.—Ray, Synops. p. 117.*

¶ *Peiresc. vita, lib. ii.*

** These birds are very common at the Cape; they pass the day on the sides of the lakes and rivers, and at night they retire to the mountains. *Kolben.*

numbers occur in the Cape de Verd islands, according to Mandeflo, who over-rates the bulk of their body when he compares it to that of a swan. Dampier met with some nests of these birds in the isle of Sal. They are abundant in the western provinces of Africa, at Angola, Congo, and Bissao, where, from a superstitious respect, the negroes will not suffer one of them to be hurt *; and they live undisturbed in the midst even of the dwellings. They occur likewise in the bay of Saldana †, and in all the countries adjacent to the Cape of Good Hope, where they spend the day on the coast, and retire in the evening to the rank herbs which grow on some parts of the contiguous lands ‡.

* The Flamingos are numerous in this canton, and so respected by the Mandingos of a village distant half a league from Geves, that they are found in thousands; these birds are of the bulk of a turkey-cock . . . the inhabitants of the same village carry so far the respect for them, that they will not permit them to receive the least injury. They leave them tranquil on the trees amidst their dwellings, without being incommoded by their cries, which however are heard a quarter of a league. The French having killed some of them in this asylum, were obliged to conceal them under the grass, lest the negroes should be prompted to revenge the death of a bird so revered. *Relation de Brue, Hist. Gen. des Voy. tom. ii. p. 590.*

† In the multitude of birds seen in the bay of Saldana, the pelicans, the Flamingos, the ravens, which all have a white collar round the neck, numbers of small birds of different kinds, not to mention sea-fowl, which are of endless variety, fill the air, the trees, and the land, to such degree, that a person cannot stir without putting up many. *Relation de Downton, Hist. Gen. des Voy. tom. ii. p. 46.*

‡ *Hist. Gen. des Voy. tom. v. p. 201.*

The

The Flamingo is undoubtedly a migratory bird, but visits only the warm and temperate regions, and never penetrates to the northern tracts. In certain seasons, they appear in several places, nor can we be certain whence they come, but they never seem to travel towards the north; and if some solitary stragglers are found at times in the interior parts of France, they have been driven thither in a storm. Salerne relates, as an extraordinary occurrence, that one was killed on the Loire. The hot countries are the scene of their migrations: and they have traversed the Atlantic; for they are of the small number of birds that inhabit the tropical regions of both continents*.

They are seen in Valparaiso, at Conception, and at Cuba †, where the Spaniards call them *flamencos* ‡. They occur on the coast of Vene-

* In the island of Mauritius, or of France, there are many of the birds called *giants*, because they carry their head six feet high; they are exceeding tall, and their neck is very long; their body is not larger than that of a goose: they feed in marshy places; and the dogs often take them by surprize, as they require a considerable time to rise from the ground. We once saw one at Rodrigue, and it was so fat that we caught it with the hand: it is the only one which we ever remarked, which makes me think that it had been driven thither by some violent wind, which it could not resist. This game is pretty good. *Leguat*.

† In the small islands under Cuba, which Columbus called the *Queen's Garden*, there are red birds shaped like cranes, which are peculiar to these islands, where they live on salt-water, or rather on what they find proper for their support in it. *Herrera*.

‡ De Laet.

zuela, near the White island, that of *Aves*, and that of *Roche*, which is a group of rocks *. They are well known at Cayenne, where the natives of the country name them *tococo* ; they fly in flocks on the sea-beach †. They inhabit also the Bahama islands ‡. Sir Hans Sloane ranks them among the birds of Jamaica §. Dampier found them at Rio de la Hacha ||. They are extremely numerous at St. Domingo ¶, in the Antilles and the Caribbee islands **, where

* De Laet.

† Barrere.—The woods at Cayenne are inhabited by Flamingos, colibris, ocos, and toucans. *Voyage de Froger*.

‡ Klein.

§ “ These are common in the marshy and fenny places and “ likewise shallow bays of Jamaica.”

|| I have seen Flamingos at Rio de la Hacha, and at an island situated near the continent of America, opposite to Curaçoa, and which the pirates call the *Flamingo Island*, because of the prodigious number of these birds which breed in it. *Dampier*.

¶ In St. Domingo, the Flamingos appear in great numbers on the skirts of the marshes ; and as their feet are exceedingly tall, they may be taken at a distance for an army in martial array. *Hist. Gen. des Voy. tom. xii. p. 228.*—The places which the Flamingos frequent the most in St. Domingo, are the marshes of Gonave and Cow Island, (*Isle à Vache*) small islands situated, the one west of Port-au-Prince, the other south of the city of Cayes. They are fond of these islands, because they are not inhabited, and because they find in them many lagoons and salt-marshes ; they also much frequent the famous pool of Riquille, which belongs to the Spaniards. They are seen east from the plain *Cul-de-sac*, in a great pool which contains many islets ; but the number of these birds is observed to diminish in proportion as the marshes are drained, and the tall timber cut down which skirts them. *Extract from the Mémoires communicated by the Chevalier Lefebvre Deshayes.*

** Hernandez, Rochefort.

they

they live in the little salt pools and the lagoons. That figured by Seba was sent him from Curaçoa. They occur also in Peru *, and as far as Chili †. In short, there are few parts of South America where navigators have not met with them.

These American Flamingos are entirely the same with those of Europe and Africa. The species appears single and disjoined, since it admits of no variety.

These birds breed on the coasts of Cuba and of the Bahama islands ‡ on the deluged shores, and the low islets, such as that of *Aves* §, where Labat found a number with their nests. These are little heaps of clayey and miry soil gathered from the marshes, and raised about twenty inches into a pyramid in the middle of the water, which constantly washes the base; the top is truncated, hollow, and smooth, and, without any bed of feathers or herbs, receives the eggs, which the bird covers, says Catesby, by sitting across the hillock ||, its legs hanging down, like a man
on

* De Laet.

† Frezier.

‡ Catesby.

§ Fifty leagues to the windward of Dominica.

|| I was shown a great number of these nests; they resemble truncated cones, composed of fat earth, about eighteen or twenty inches high, and as much in diameter at the base; they are always in water, that is, in meres or marshes: these cones are solid to the height of the water, and then hollow like a pot bored at top; in this they lay two eggs, which they hatch by resting on them, and

on a stool: so that only the rump and lower belly are of service in the incubation. This singular position it is obliged to adopt on account of the length of its legs, which could never be bent under it if it were squat. Dampier gives the same description of the mode of hatching in the island of Sal *.

The nests are always placed in the salt-marshes; they contain only two or at most three eggs, which are white, as thick as those of a goose, and somewhat longer. The young do not begin to fly till they have gained almost their full growth; but they run remarkably swiftly a few days after they are hatched.

The plumage is at first of a light gray, and that colour becomes deeper, in proportion as

covering the hole with their tail. I broke some, but found neither feathers, nor herbs, nor any thing that might receive the eggs: the bottom is somewhat concave, and the sides are very even. *Labat.*

* They make their nest in the marshes, where they can find plenty of slime, which they heap with their claws, and form hillocks resembling little islets, and which appear a foot and a half above the water; they make the base broad, and taper the structure gradually to the top, where they leave a small hollow to receive their eggs. When they lay or hatch, they stand erect, not on the top but very near it, their feet on the ground and in the water, leaning themselves against the hillock, and covering the nest with their tail: their legs are very long, and as they make their nest on the ground, they could not, without injuring their eggs or their young, have their legs in the nest, nor sit, nor support their whole body, but for this wonderful instinct which nature has given them. They never lay more than two eggs, and seldom fewer. Their young ones cannot fly till they are almost full grown; but will run prodigiously fast, *Dampier.*

their feathers grow ; but it requires ten or twelve months before their body attains its full size, and then they assume their fine colour, whose tints are faint when they are young, and grow deeper and brighter as they advance in age *. According to Catesby, two years pass before they acquire the whole of their beautiful red colour. Father Dutertre makes the same remark †. But whatever be the progress of this tint in the plumage, the wing first acquires the colour, and is always brighter than the other parts. The red afterwards spreads from the wing to the rump, then to the back and the breast, and as far as the neck : only in some individuals there are slight varieties of shades, which seem to follow the differences of climate : for example, the Flamingo of Senegal seemed to have a deep red, and that of Cayenne inclined to orange ; but that variation was not enough to constitute two species, as Barrere has done.

Their food is in every country nearly the same. They eat shell-fish, fish-spawn, and aquatic insects : they seek them in the mud, into which they thrust their bill and part of their head ; at

* They differ in colour, their plumage being white when they are young ; then, in proportion as they grow, they become rose coloured ; and lastly, when aged, they are entirely carnation. *De Laet, and Labat.*

† “ The young are much whiter than the old ones ; they incline to red as they grow old : I have seen some also which had their wings mixed with red, black, and white feathers ; I believe that these are males.”

the same time they continually push their feet downwards, to carry the prey with the slime to their bill, which is fitted by its indenting to retain any substance. It is a small seed, says Catesby, like millet, that they bring up by thus puddling in the mire. But it probably is nothing else than the egg of some insect; for the flies and gnats are surely as abundant in the overflowed plains of America as in the low grounds of the north, where Maupertuis saw whole lakes covered with such eggs, resembling the grains of millet *. In the islands of the new world, these birds may find abundance of this sort of food; but on the coasts of Europe they subsist on fish, the indentings of their bill serving like teeth to hold the slippery prey.

They appear to prefer the sea-shore: if they are seen on rivers, such as the Rhone †, it is never far from their mouth. They haunt more constantly the inlets, salt-marshes, and low coasts; and it has been observed, that in rearing them they require salt-water to drink ‡.

These birds always go in flocks; and to fish, they naturally form themselves into a line, which at a distance has a singular appearance, like a file of soldiers §. This propensity to dispose themselves in ranks still adheres to them when,

* Œuvres de Maupertuis, tom. iii. p. 116.

† Peiresc. vita, lib. ii.

‡ De Laet, Labat, and Charlevoix.

§ Hist. Gen. des Voy. tom. xii. p. 229.

placed

placed one against another, they repose on the beach *. They station sentinels and keep a sort of guard, as usual with all gregarious birds. When they are engaged in fishing, their head plunged in the water, one of them remains sentry, keeping his head erect †: on the least menace of danger, he gives a loud cry, audible at a great distance, and much like the sound of a trumpet †; instantly the whole flock rises, and preserves in its flight an order similar to that of cranes. Yet if these birds be suddenly surprized, they remain stupid and motionless thro' fear, and afford the fowler time to knock them

* They usually rest upon their legs, one against the other, in a single line; in this situation any person at the distance of half a mile would take them for a brick wall, because they have exactly the same colour. *Roberts, Hist. Gen. des Voy. tom. xi. p. 364.*

† "They are constantly on their guard against any surprizal by their enemies, and it is alledged that some stand as sentinels while the rest are occupied in searching for food; besides, they are said to smell powder at a distance, and are therefore approached with difficulty. Our old buccaneers employed a stratagem for killing them similar to what the people of Florida are said to use, in order to approach the deer; they covered themselves with ox-skins, and advanced against the wind upon the Flamingos, which, being accustomed to see oxen feed in the savannas, are not intimidated, and thus the hunters can easily fire at them." *Charlevoix.*

‡ "These birds have such a strong voice, that any person hearing them would suppose they were trumpets founding; and while they have their head concealed, dabbling in the water, like the swans, to find there subsistence, there is always one that continues erect as sentinel, its neck extended, its eye watchful, its head roving: as soon as it perceives a person, it sounds the trumpet, gives alarm to its district, rises the first on wing, and all the rest follow it." *Idem.*

down

down one after another. Of this we are informed by Dutertre, and it may also reconcile the opposite accounts of navigators; some representing the Flamingos as timorous birds *, which can hardly be approached †, while others assert, that they are heavy and stupid ‡, and suffer themselves to be killed one after another ||.

Their flesh is highly esteemed. Catesby compares its delicacy to that of the partridge: Dampier says, that it has a very good flavour, though lean: Dutertre found it to be excellent, notwithstanding a slight marshy taste. Most travellers give the same account §. M. de Peiresc is almost the only one who asserts that it is bad: but, besides the difference produced by climate, these

* " Their hearing and smell are so acute, that they can wind at a great distance the fowlers and the fire-arms; and also, to avoid all surprize, they prefer alighting on open places in the midst of marshes, whence they can descry their enemies from afar, and there is always one of the band that keeps watch." Rochefort, *Hist. des Antilles*.

† These birds are difficult to approach: Dampier and two other fowlers having placed themselves in the evening near their retreat, surprized them so successfully as to kill fourteen at three shots. Roberts, in the *Hist. Gen. des Voy. tom. ii. p. 364*.

‡ " *Stolida Avis*," says Klein.

|| A man concealing himself from their sight, may kill a great number of them; for the report of a discharge does not make them stir, nor are they alarmed at seeing their companions killed in the midst of them; but they remain with their eyes fixed, and, as it were, struck with astonishment, till they are all destroyed, or at least most of them. Catesby.

§ These birds are numerous near the Cape; their flesh is wholesome and savoury; their tongue is said to have the taste of marrow. *Hist. Gen. des Voy. tom. v. p. 201*.—They are fat, and their flesh is delicate. Rochefort.

birds

birds must be exhausted and lean with fatigue, when they arrive on our coasts. The ancients speak of them as being exquisite game *. Philostratus reckons them among the delicacies of entertainments †. Juvenal, upbraiding the Romans with their wasteful luxury, says, that they cover their tables with the rare birds of Scythia, and with the *phœnicopterus*. Apicius describes the scientific mode of seasoning them ‡; and it was this man, *who*, says Pliny, *was the deepest abyss of wastefulness* ||, that discovered in the tongue of the Flamingo that exquisite relish, which recommended it so highly to epicures §. Some of our navigators,

* When Caligula had reached such a pitch of folly as to fancy himself a divinity, he chose the *phœnicopterus* and the peacock as the most exquisite victims to be offered up to his godship; and the day before he was massacred, says Suetonius, he was besprinkled at a sacrifice with the blood of a *phœnicopterus*. *In Vit. Calig. c. 57.*

† Vita Apollon. lib. viii.

‡ “ Cleanse, wash, and truss the *phœnicopterus*; put it into a kettle; add water, salt, and a little vinegar. At half boiling, tie in it a bunch of leeks and coriander, that it may stew: near boiling, drop into it spiced wine, and colour the mixture. Put into a mortar pepper, cummin, coriander, the root of laser, mint, rue; pound these, pour on vinegar, add walnut-date. Pour on it its own gravy, and turn the whole back into the same kettle: close it with starch; pour on the gravy, and carry it in.”

— *Otherwise*: “ Roast the bird; grind pepper, loveage, parsley-seeds, sesame, spiced wine, wild parsley, mint, dry onions, walnut-dates; and temper the whole with honey, wine, pickle, vinegar, oil, and spiced wine.” *De Obsen. & Cond. lib. vi. 7.*

|| *Phœnicopteri linguam præcipui esse saporis Apicius docuit, nepotum omnium altissimus gurgis.*

§ Lampridius reckons among the extravagancies of Heliogabalus, his ordering for his table dishes filled with the tongues of the *phœnicopterus*.

navigators, whether from the prejudice derived from antiquity, or from their own experience, commend the delicacy of that morsel *.

The skin of these birds, which is well clothed with down, serves for the same purposes as that of the swan †. They may be easily tamed, either by taking them young from the nest ‡, or by ensnaring the adults in gins, or any other way || ;
for

phænicopterus. Suetonius says, that Vitellius bringing together the delicacies of all the parts of the world, caused to be served up at his entertainments, at once, the livers of scari, the roes of murænæ, the brains of pheasants and peacocks, and the tongues of *phænicopters*; and Martial, upbraiding the Romans for their destructive taste, makes this bird complain in the following lines :

*Dat mihi penna rubens nomen ; sed lingua gulosis
Nostra sapit : quid, si garrula lingua foret ?*

* But above all, their tongue passes for the most exquisite morsel that can be eaten. *Dutertre*.—Their tongue is very large, and near the root there is a lump of fat, which makes an excellent morsel. A plate of Flamingos tongues, according to Dampier, would be a dish fit for the king's table. *Roberts*.

† They are flayed, and their skins are made into excellent fur, which would be very useful for persons troubled with a cold debilitated stomach. *Dutertre*.

‡ I wished much to have young ones to tame ; for this succeeds, and I have seen some very familiar at the house of the governor of Martinico . . . In less than four or five days the young ones which we took came to eat out of our hands ; yet I kept them always fastened, without trusting much to them ; for one which was loosened fled as swift as a hare, and my dog could with difficulty overtake it. *Labat*.

|| “ A wild Flamingo having alighted in a mere near our dwelling, a tame Flamingo was driven thither, and the negro boy who had the charge of it, carried the trough in which it fed to the edge of the mere, at some distance, and concealed himself hard by : the tame Flamingo soon approached, and the wild one followed, and desiring to partake in the repast, it began to fight and chase
“ its

for though very wild in the state of liberty, the Flamingo, when once caught, is submissive, and even affectionate. In fact, it has rather a timorous than a lofty spirit; and the same fear, which prompts it to fly, subdues it after it is taken. The Indians have completely tamed them. M. De Peiresc saw them very familiar, since he gives several particulars of their domestic life. They eat more in the night, he says, than in the day, and soak their bread in water. They are sensible to cold, and creep so close to the fire as to burn their feet; and when one leg is disabled,

" its rival; so that the little negro, who lay on the ground as if he
 " had been dead, snatched the opportunity to catch the bird by
 " seizing its legs. One of these Flamingos, caught nearly in the
 " same manner, lived fifteen years in our court-yard; it continued
 " on good terms with the poultry, and even caressed its fellow-
 " lodgers, the turkies and ducks, by scratching their back with its
 " bill. It fed on the same grain as the other poultry, provided that
 " it was wetted with a little water; it could eat only by turning the
 " bill to lay hold of its food sidewise: it dabbled like the ducks,
 " and knew those persons so well who usually took care of it, that
 " when hungry it went to them and pulled their clothes with its
 " bill: it often kept itself mid-legs in water, seldom changing its
 " place, and plunging from time to time its head to the bottom, to
 " catch small fishes, which it prefers to grain. Sometimes it ran
 " on the water, striking it alternately with its claws, and support-
 " ing itself by the motion of its wings half extended. It was not
 " fond of swimming, but only of puddling with its feet in shallow
 " water. When it fell, it rose with great difficulty; and accordingly
 " it never rested on its belly to sleep: it only drew one of its legs
 " under it, leaned upon the other, passed its neck upon its back,
 " and concealed its head between the end of its wing and its body,
 " always on the side opposite to the leg which was bent." *Letter from*
M. Pemmes, commander of militia in the district of Nipes, at St. Do-
mingo, communicated by the Chevalier Deshayes.

they

they walk on the other, and assist their motion by using their bill like a crutch on the ground. They sleep little, and rest only on one leg, the other being drawn under the belly. Yet they are delicate, and difficult to rear in our climates: it appears even, that, though pliant to the habits of captivity, that state is very unsuitable to their nature, since they cannot support it long, but drag out a languishing existence; for they never propagate when reduced to domestication.

END OF THE EIGHTH VOLUME.

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